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TACTICAL COMMUNICATION IN WORLD WAR II

PART II

SIGNAL COMMUNICATION IN THE SICILIAN CAMPAIGN

HISTORICAL SECTION
SPECIAL ACTIVITIES BRANCH

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Tactical Communication in World War II.

Part II

summary
SIGNAL COMMUNICATION

IN THE

SICILIAN CAMPAIGN

Signal Corps Historical Section, New York
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ii

PREFACE

This story is based very largely on the excellent reports sent to the Signal Officer, Seventh Army, at his request. They have been supplemented by information drawn from the files of Plans and Operations Division, Intelligence Branch, Combat Analysis Section (AGO), and the Signal Corps Historical Section.

It would have been desirable, ideally, to have compared actual operations, item by item, with the Signal Annex reproduced as Chapter II and the other annexes not reproduced in this document. For such an undertaking, however, neither data nor time was sufficient.

By way of assisting the interested student to do something of that sort himself, several diagrams illustrative of Seventh Army communications have been furnished (in the Accompanying Appendices.) Those who care to pursue the matter further will find II Corps diagrams in the records of the 53d Signal Battalion and 2d Armored Division diagrams in those of the 142d Armored Signal Company--available in both the AGO and the Signal Corps Historical Section. For situation maps and original overlays it is generally necessary to consult the divisional G-2 and G-3 records, also in the AGO files.

While this story stands by itself, he who reads also "Part One: Signal Communication in the North African Campaigns" will gain more from it.

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iii

TABLE OF CONTENTS

Preface	ii
Illustrations	vi
Contents of Accompanying Envelope	vi
Ch. I. The Plans and Preparations Phase	1
<u>A. The Tactical Plan</u>	1
<u>B. Problems of Organization, Training and Supply</u>	2
Organization (2); Training (4); Supply (5); Communications (6)	
Ch. II. The Signal Communication Plan	8
Section I: Situation	8
Section II: Mission and General Plan	14
Section III: Operations	16
Section IV: Administration	24
Section V: Command	26
Appendix "A": List of Fixed Radio Stations	27
Appendix "B": Enemy Wire Communications	33
Appendix "C": Local Power Supply in Towns	39
Appendix "D": Photographic Plan	41
Appendix "E": Pigeon Communication	43
Appendix "F": Radio on Headquarters Ships	44
<u>For charts and diagrams, see Accompanying Envelope</u>	
Appendix "G": Radio Plan for the Assault	45
<u>For charts and diagrams, see Accompanying Envelope</u>	

DECLASSIFIED

SECRET

DECLASSIFIED

iv

Appendix "J": Detail Wire Plan	47
For maps, see Accompanying Envelope	
Appendix "N": Air Courier Dispatch Service	51
Appendix "O": Radio Command Channels	52
Ch. III. Operations to 21 July 1943	54
<u>A. 21 June--10 July</u>	54
1st Armd Sig Bn (54); 53d Sig Bn (55); Co "A", 51st Sig Bn (56); 1st Sig Co (56); 128th/849th (57)	
<u>B. 10--12 July</u>	57
1st Armd Sig Bn (58); 51st Sig Bn (60); 53d Sig Bn (60); DIME units (61); CENT Units (64); JOSS Units (64); KOOL Units (68); Force Radio Operations (70)	
<u>C. 12--21 July</u>	71
Army Hq (71); II Corps Units (74); Provisional Corps Units (75); Supply (78)	
Ch. IV. Operations 21 July--17 August 1943	80
<u>A. 21--25 July</u>	80
Army Hq (80); II Corps Units (83); Provisional Corps Units (84); Supply (84)	
<u>B. 25 July--6 August</u>	85
Army Hq (85); II Corps Units (88); Supply (91)	
<u>C. 6--17 August</u>	92
Army Hq (92); II Corps Units (98)	
<u>D. Miscellaneous Data</u>	100
53d Sig Bn (100); 3d Sig Co (102); 1st Sig Co (103); 82d A/B Sig Co (103)	

DECLASSIFIED

DECLASSIFIED
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v

Ch. V. Problems and Lessons of the Sicilian Campaign 105

A. Plans and Organization 105

Planning and Coordination (105); Loading (108);
Separation of Men from Equipment (109); Opera-
tional Organization (109); Signal Staff and
General Staff (110)

B. Communications Operations 111

Message Center (111); Radio Operations (114);
Radio Procedure (113); Wire (118); Visual Means
(125); Pigeons (125); Photography (125A); Intelli-
gence and Security (126)

C. Men and Matériel 128

Personnel (128); Training (129); Supply Operations
(131); Supply Policy (132); T/O's (134); T/BA (137)

INDEX 139

DECLASSIFIED
~~RESTRICTED~~

DECLASSIFIED

vi

ILLUSTRATIONS

SC 175907	Paratroops at Gela, D-day	Following p. 57A
SC 183907	3d Division regimental CP, D-day	65
SC 179425	Wire troubles crew, 45th Division	88
SC 179426	Pole-line construction	88
SC 180232	Communications at an artillery OP	91
SC 180237	Motion-picture cameraman at work under fire	125A

CONTENTS OF ACCOMPANYING ENVELOPE

1. Ten charts and diagrams supporting Appendix "F" of the Signal Annex (Chapter II).
2. Six charts and diagrams supporting Appendix "G".
3. Two line route maps supporting Appendix "J".
4. Nine diagrams and two maps illustrating operations at Hq Seventh Army.
5. Map showing the operation of the Single-channel VHF Radio Relay circuits.

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CHAPTER I

THE PLANS AND PREPARATIONS PHASE

On 15 January 1943, when the Tunisian horizon was still gloomy, the Combined Chiefs of Staff decided, at the memorable Casablanca Conference, that the conquest of Tunisia should be followed by an invasion of Sicily. The first plan, approved 25 March, envisaged a British assault on Southeastern Sicily between Licata and Scoglitti on D-day, and American attacks at several points in Western Sicily on D plus 2 and D plus 5 calculated to reduce Palermo swiftly. By 3 May a new plan had been evolved: while the British Eighth Army was to land in the southeast corner and on the east coast of Sicily, the American Seventh Army would occupy the territory between Scoglitti and Licata. The purpose of these assaults and of the drives to follow was of course the destruction of Axis power in Sicily.

Headquarters, 15th Army Group, was established early in June at the site of ancient Carthage, near Tunis.¹

The plans and preparations for communications involved (1) the general tactical scheme for the invasion; (2) problems of organization, training and supply; (3) and numerous specific communications schedules. This chapter will cover the first two.

A. The Tactical Plan

Lt. Gen. G. S. Patton, Jr.'s Seventh Army -- or Force 343

1. Signal Corps Technical Information Letter No. 30, p. 6; Ibid., No. 31, pp. 20, 22; Interview Lt. Col. E. C. Page, Sept '44, p. 15.

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2

(called "I Armored Corps, Reinforced" until D-day) -- was divided into four principal parts. The assault echelon included II Corps (SHARK Force, Lt. Gen. O. N. Bradley, Commanding) and the 3d Division, Reinforced by Combat Command "A" of the 2d Armored Division (JOSS Force, Maj. Gen. L. K. Truscott, Commanding). II Corps was composed, for the period 10-15 July, of the 1st Division less the 18th Regimental Combat Team plus two Ranger and one Combat Engineer Battalions (DIME Force), the 45th Division (CENT Force), and the 505th Paratroop CT. The "floating reserve" (KOOL Force) consisted of most of the 2d Armored Division plus the 18th RCT. The 9th Division and the 82d Airborne Division less the 505th PCT were to be held in reserve in North Africa.²

The job of II Corps was to take Gela, Scoglitti, and the nearby airfields. 3d Division, Reinforced, on the left, was responsible for Licata and its vicinity.

E. Problems of Organization, Training, and Supply

Organization. These plans were brought to the attention of the Signal Officer, I Armored Corps, Reinforced, about 21 February, and he submitted soon afterwards an estimate of the signal troops necessary. The estimate differed from what he received in only a few particulars. Units requested but not assigned included one signal construction battalion, one signal service battalion, and one signal pigeon company. It was possible to furnish only three detachments of a signal repair company

2. Force 343, Field Order No. 1, Annex 3: Troop List, 19 June 1943; Operation of II Corps U.S. Army in Sicily 10 July-17 August 1943, p. 23. Each of the three commanders mentioned has since acquired an additional sta

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3

rather than a whole company, one signal depot company rather than two, and four photographic units rather than eight. On the other hand, while no application was made for a signal operations company, such a company was provided. (According to one estimate the Force was entitled to a signal operations battalion.)³

For the Force Headquarters Signal Section he requested 16 officers and 50 enlisted men and received 12 officers. The enlisted contingent was 50 on paper, but actually never exceeded 21. Inasmuch as success would create a need for personnel who could relieve tactical units of rear area responsibilities, a Base Signal Section was set up too. Most of the 20 officers desired for this work, however, had to be obtained from the United States; it would be some time before they arrived. In the meantime, therefore, "a number of officers were attached to the Signal Section for duty with the Base Section" to assist the Signal Supply Officer of what became Seventh Army.⁴

Profiting from the experience in Operation "TORCH", Force 343 secured four headquarters ships -- vessels equipped to handle separate Army and Air Force channels as well as Navy circuits, and not intended for participation in naval combat. Only one, the U.S.S. Ancon, was a true headquarters ship; the others were improvised. Furthermore, each headquarters divided its personnel and equipment between the main CP and an alternate CP vessel -- also improvised. All headquarters ship radio

3. SCFIL No. 31, p. 19.

4. Ibid., pp. 19-20; Signal Corps Participation in the Sicilian Operation, 22 Feb to 20 Aug 1943 (referred to hereinafter as "Sic Opn"). p. 8.

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4

installations were inspected by the Radio Officer, AFHQ.⁵

Another lesson from the previous landing operation -- already appreciated by the British -- was the value of a friendly intercept service that would keep the General Staff up to date on events at the front and check the observance of security regulations. The advantages and limitations of "J" service were explained to the staff sections concerned, and operations organized under the supervision of G-2, I Armored Corps, Reinforced. An attempt was made to extend this coordination to the British Eighth Army, but had to be given up "because of the difficulty of transportation to Tripoli". The forward elements in the network were to be manned by the Radio Intelligence Platoons of the 1st and 3d Signal Companies, and two British officers who had seen "J" service duty with the British First Army were attached (29 May) to the American headquarters to assist with the necessary training.⁶

Training. The training of all the Signal Corps troops assigned to Operation "HUSKY" was conditioned principally by two factors: many had yet to be baptized by fire, and time was -- as usual -- short. Most of the men of the 1st, 3d, and 9th Signal Companies, the 71st and 72d Signal Companies (Special), the 286th Signal Company (Composite), the 53d Signal Battalion, and the 128th Signal Radio Intelligence Company had combat experience; but that was not the case with the other signal units involved. Those who had served in the Communications Zone during the Tunisian campaign had not had the opportunity to acquire adequate training for amphib-

5. Sic Opn, p. 12; Page Interview, p. 16.

6. Sic Opn, p. 12.

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ious operations and tactical communications. About 25 per cent of the total signal strength were replacements without any signal specialist training at all.

Besides, there were three special problems. To retrain all radio operators in Link-Sign Procedure entailed bringing representatives of signal units together from all over French North Africa; two one-day courses were organized and offered one month apart, and the graduates then carried the instruction back to their team-mates. In order to develop cadres capable of operating and maintaining Signal Corps carrier equipment, a seven-day school was conducted at Mediterranean Base Section. Owing to the fact that the equipment in question had not yet arrived in quantity, interim instruction was necessary also in the use and care of British Speech plus Simplex and Speech plus Duplex equipment.⁷

Supply. Signal supply operations were begun in May. Four sub-task forces were to be furnished, in addition to their T/BA shortages, such maintenance as was permitted by shipping assigned, place of mounting, and the turn-around time of the vessels concerned. JOSS and DIME Forces were to carry 7-day maintenance LST and LCT loaded in North Africa, two more 7-day maintenance shipments to arrive on follow-up convoys. GEM Force was to bring 21-day maintenance, combat loaded, from the United States; KOOL Force ("floating reserve"), 21-day maintenance combat loaded in North Africa. Additional requisitions covered the signal supplies for Ranger

7. Ibid., pp. 11-12. See also S.L. Jackson, "Fixed Wire, NATOUSA" (1944), pp. 17-18.

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6

and airborne units. The total prepared during the planning phase was 92, of which 29 were to be filled in the United States and 63 in North Africa. They represented some 19,220 tons of signal supplies and equipment.

Protection of these materials against moisture and rough handling called for intensive efforts in moisture-proofing and packing. Procurement of water-proof carrying bags was "a constant source of trouble". On the other hand, the preparatory phase saw the successful mounting of SCR-299's in moisture-proof housing that was installed on 2½-ton amphibious trucks; 12 of these equipments were set up and issued to the sub-task forces.

Communications. To provide communications for these preliminaries was in itself no mean undertaking. The units involved, dispersed over 1,200 miles of French North Africa, had to be linked by telephone and teletypewriter circuits, three radio nets, motor messenger service, and an air courier service organized jointly by the Adjutant General and Signal Sections of I Armored Corps, Reinforced. The officers assigned to the courier service travelled some 2,260 miles a day. I Armored Corps, Reinforced, also supplemented the existing higher headquarters message centers (Casablanca, Oujda, Oran, Algiers) with sub-message centers at Constantine, Tebessa, and Bizerte--manned by detachments of the 51st Signal Battalion. The main Corps message center handled a daily average of 1,525 messages during the preparatory phase, reaching a peak of 15,750

8. Sic Opn, pp. 12-13.

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7

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messages in the week 20-26 June.

Other important communications activities during this period, apart from intra-unit training, were the inspection of 1 March of the facilities at Valletta, Malta -- destined to be the Advance CP for the 15th Army Group; the assignment (from the United States) of several teams of radio operators and cryptographers to transport vessels, on detached service with the Navy; and the installation of 70 radio transmitters and receivers in landing ships of the Allied Navy by the Radio and Radio Repair Section of Hq Co, 51st Signal Battalion.

10

9. Ibid., pp. 10-11.

10. Page Interview, p. 14; Interviews, Capt. E.E. Erickson and T/Sgt A.C. Bethard, 20 Nov '44; History, 51st Sig Bn, 1943, p. 3.

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CHAPTER II

THE SIGNAL COMMUNICATION PLAN

This chapter consists of Annex No. 10 to Field Order No. 1, Hq Force 343. All available appendices have been included.

SECTION I

SITUATION

1. General Situation.

a. This Signal Communication Plan covers the provision of signal communications for Force 343, a force moving by sea to occupy the south-eastern coast of Sicily. The area which this force plans to occupy consists of that territory within the limits of the Salza River on the west, the Irmínio River on the east and north along the line of towns, Riesi, Mazzarino, Caltagirone, and Vizzini. This operation is coordinated with a British Force, Force 545, which will occupy the Eastern coast of Sicily.

b. Three simultaneous pre-dawn landings are to be carried out between the towns of Licata and C. Scaramia for the purpose of establishing a broad beachhead, and allowing subsequent operations over this beachhead. The initial objective is to capture the port of Licata and all the airports in the area.

2. Special Situation.

a. Enemy Signal Countermeasures.

(1) It is expected that the enemy will resort to radio "jamming" tactics from time to time when the opportunity presents itself. Plans will be made as to the proper course of action in the event.

(2) It is expected that the enemy will attempt to inject false messages into their traffic to cause "peaks" in an effort to confuse our radio intelligence.

(3) It is known fact that the enemy is extremely capable as to intercept activity.

(4) It is recognized that the enemy has capable cryptanalysts and will make every effort to obtain solutions to our codes and ciphers.

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9

(5) There are no details known as to the strength and organization of enemy signal intelligence units.

b. Installations in theater which may be available.

(1) Radio (see Appendix "A" attached)

(2) Wire (see Appendix "B" attached)

c. Local Power Supply in Towns.

(See Appendix "C" attached)

d. Existing Commercial Facilities.

(1) Initially, each task force commander will have complete control of all telecommunication facilities in areas occupied by his troops. This control will be exercised through his chief signal officer, who will coordinate the exploitation of these facilities and their allotment to the various services.

(2) As a general rule, naval and air telecommunication installations will be made available for naval and air services if so required, since the equipment will usually be of special design.

(3) All existing telecommunication services will be closed down immediately and the installations are secured. Personnel will be evacuated and a guard mounted. Care will be taken to secure and preserve all records. Services will not be resumed except under orders of the commander.

(4) Installations secured will be operated by signal personnel of the Allied Forces. Friendly alien personnel may be employed provided their integrity can be established, but they will not be employed without adequate supervision.

(5) Broadcast transmitters will be taken over as military stations and will, if required, be used initially for communication purposes. They also may be required in the early stages of the operation for broadcasting of announcements by the military commander. As soon as these stations can be released from purely military use, they will go to control of personnel of P.W.S. including technical personnel, which will accompany each task force. The technical personnel will be available to operate broadcast stations in the initial period when the transmitters may be required for purely military communications.

(6) No telegraph services will be operated in Sicily except those wholly controlled by the Allied Forces. No civilian will have access to any telegraph facilities, except through AMGOT (Allied Military Government of Occupied Territories, late Civil Affairs).

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(7) All civil telephone services will be discontinued as such, local telephone services will be re-opened for military purposes requirements, certain public services or individual civilians may be allowed access to local telephone services. Among these will be included such civilian agencies or persons, for example hospitals and doctors, as may be nominated by AMGOT. Such agencies or persons will have no direct access to long distance telephone services, but may be permitted by AMGOT to make calls when necessary from military offices.

e. Information on Procedures.

(1) Combined Radio Telegraph (W/T) Procedure, short title, CCBPI, will be used by all army ground forces, U. S. and British, taking part in the operation HUSKY for:-

(a) Combined use; that is, when working to other services of the other nation.

(b) Joint use; that is, when working to other services of the same nation.

(2) "Combined Operating Signals", short title, CCBP2, will be used whenever CCBPI is used.

(3) It will be the object of all signal planning to insure that personnel of the same service and the same nation operates both ends of a channel whenever possible, thus reducing the use of CCBPI and CCBP2 to combined or joint usage in cases where no previous arrangements have been possible.

(4) Consequent on the adoption of this procedure within the forces employed in HUSKY the following procedures will no longer be used by army ground forces.

(a) Basic (British-U.S.) Signal procedure.

(b) British Inter-Service Procedure.

(c) U. S. Joint Army-Navy Procedure, for use as a joint procedure.

f. Naval Plan for Communication between Ships.

An outline Naval Communications Plan will be published and will be listed as Appendix "K" to this Annex.

g. Joint Codes and Ciphers

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(1) To provide essential flexibility in handling cryptographed traffic, U.S., as well as British cipher teams, will be provided at all task force (Army) and Corps Headquarters throughout. These teams will be adequately equipped to handle messages in the appropriate U. S. and British systems prescribed for the operation. In addition, U. S. units down to and including divisions will hold the British Interservice Cipher for communication with the British Army, Navy, or the Royal Air Force. Royal Air Force Group Headquarters will hold U. S. Army SIGABA and Strip systems.

(2) All units within Force 343 down to and including divisions will hold the Joint Army-Navy SIGABA (Navy ECM) and Strip systems. Converter, M-209, keys for use in the Joint Army-Navy traffic will be held in Army units down to battalions and in the Navy, down to minor war vessels. All the above cipher keys will be furnished by Force 141 and distributed by Force 343.

(3) For detailed methods of usage see Signal Instruction Number 9, and SOI item 2e-1.

h. Information on the Aircraft Warning System.

(See Air Plan, Appendix "I" attached.)

i. Air Plan.

(1) The signal plan for the XII Air Support Command has been drawn up to cover the communication and radar coverage during the assault and initial establishment of forces in Sicily. The XIII A.S.C. aircraft operating from airfields at Licata and Ponte Olivo and subsequently at Biscara and Comiso will be controlled through the facilities of the information center.

(2) Light warning and G. C. I. units are to be landed with the assault to provide early warning of the approach of enemy aircraft and control of night fighters. Long range warning equipment will be brought into operation as soon as possible. D/F and homing facilities will be provided at all airfields.

(3) Plans as drawn up do not cover the entire reduction of Sicily; however, as positions are secured, the communication and Radar system will be expanded to the fullest extent. This work will be done by the communication, air warning and construction units of the XII A. S. C.

(4) Proper coordination as to codes, panel codes, visual signals, geographical maps and such will be made with the ground force and incorporated in the SOI of all arms.

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12

(5) Coordination with the R. A. F. as to frequencies and Call signs has been made through N.A.A.F. and N.A.T.A.F.

(6) Air Support Parties from the 3d A.S. Comm. Sqdn. are being assigned to the respective Infantry Divisions, Task Force and Corps Headquarters taking part in the operation.

(7) Advance landing Ground Parties will go ashore at Gela and Licata to establish radio communications with XII A.S.C. Headquarters and act as advance aircraft control agencies as soon as airfields are captured.

(8) Coordination with Naval units as necessary for such items as are required in the SOI will be made and included prior to issue.

(9) All personnel will be given verbal instructions as required prior to the landing operations.

3. Command Posts

a. A. F. H. Q.

Main - Algiers
C. P. - Malta

b. Hq. Force 141

Tactical - Malta (Returning to Tunis Area)
Main and Rear - Tunis Area (Probably La Marsa)

c. Hq. Force 343

C.P. - (1) Hq Ship "Monrovia"
(2) Sicily later

Rear - (1) Bizerte
(2) Sicily later

d. II Corps

C.P. - (1) Hq Ship "Ancon"
(2) Sicily later

e. Hq CENT force

C.P. - (1) Hq. Ship "Ancon"
(2) Sicily later

f. Hq DIME Force

C.P. (1) Hq Ship "Samuel Chase"
(2) Sicily later

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g. Hq JOSS Force

C. P. (1) Hq Ship "Biscayne"
(2) Sicily later

h. Hq KOOL Force

C.P. (1) Army Transport "Orizaba"
(2) Sicily later

i. NATAF

C.P. - Tunis Area

4. Enumeration of Signal Corps Troops

a. Taking Part in the Assault.

Detach. 1st Armored Signal Bn.

Detach. 51st Signal Bn.

Det. 206th Signal Depot Co.

Det. 163rd Signal Photo Co.

Det. 286th Signal Co. Spec.

Det. 177th Signal Repair Co.

Det. _____ Broadcasting Co.

71st Signal Co. Spec.

Detach. 72d Signal Co. Spec

74th Signal Co. Spec.

45th Signal Co.

1st Signal.

3d Signal Co.

82d Airborne Signal Co.

142d Armd Signal Co.

b. Following on D plus 4

53d Signal Bn.

1st Armd Signal Bn (less detachments)

206th Signal Depot Co. (less detachments)

286th Signal Co. Spec. (less detachments)

Detach. _____ Prov. Port Service Co.

c. Following on later Convey.

51st Signal Bn. (less detachments)

9th Signal Company

229th Signal Cpn Co.

128th Sig. R. I. Co.

_____ Prov. Sig. Port Service Co. (less detachments)

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14

Pigeon Flat, Co. E, 829th Sig Service Bn
206th Signal Depot Co. (less detachments)
Detach. 849th Sig. Int. Service Co.
72d Signal Co. Spec. (less detachments)
Signal Depot Co.
No. 52 Wireless Intelligence Section (Br)

SECTION II

MISSION AND GENERAL PLAN

5. The Mission

The Signal Mission is to provide communications.

- a. As prescribed by Force 141.
- b. To major units composing Force 343
- c. To the Navy ashore.
- d. To the various headquarters of the 12th CASG
- e. To subordinate units directly attached to Force 343

6. General Plan

To provide a Signal Service with the following capabilities:

a. Operating headquarters communications, afloat and ashore; to handle all administrative, personnel, communication, training, photographic, pigeon, supply and signal intelligence activities.

b. Operating message centers to service Force 343 headquarters and the major units of this Force, and subordinate units attached directly to Force 343.

c. Operating a messenger service between Force 343, major units of the Force, Air Headquarters, subordinate units attached directly to the Force, base radio station, main beach command posts and harbor authorities.

d. Installing, operating, and maintaining radio communications to provide:

- (1) Communication between Force 343 afloat and ashore, and the major units within the force.
- (2) Communication between Force 343 and Force 141.
- (3) Communication between II Corps and 30th Corps (Br)
- (4) Communication between forward assault elements ashore, and navy afloat.

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15

- (5) Communication between forward elements ashore and air.
- (6) Communication for air support by shore and aircraft.
- (7) Channels for ship fire control by control parties ashore.
- (8) Communication between air and anti-aircraft systems.
- (9) Such radio nets within units and subordinate units as required to facilitate their control.

e. Installing, operating and maintaining wire communications.

(1) Initially

From Force Headquarters to the headquarters of the JOSS Force, II Corps, and such other units of Force 343 as may be located in the vicinity.

(2) Later

(a) Establish later communication between Force 343 and 12th Army (Br) in accordance with instructions from Force 141.

(b) Start the repair and operation of the commercial wire facilities within the area occupied by Force 343. These facilities are to be used for military purposes only, until released for civilian use by the Commanding General, Force 343.

(3) Finally

(a) Coordinate the use of all facilities in the area under control of Force 343 to provide the necessary wire communication for the Army, Air Corps, and the Navy.

(b) Construct and operate the Force 343 portion of the wire plan as established in "Outline Plan - Line Communications - Operation HUSKY," dated 17 April 1943, Headquarters 141.

f. Operating a Signal Intelligence Service to provide for:

- (1) The interception of enemy radio communications.
- (2) Radio goniometric location of enemy radio transmitting stations.
- (3) Forwarding to G-2 all intelligence derived from above sources.

g. Establishing, operating, and maintaining a signal depot.

A signal corps depot will be established, operated and maintained in the vicinity of Licata for the receipt, storage, and issue of signal

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corps equipment, material and supplies. A sub depot will be similarly established at Siracusa to handle U.S. signal supplies entering that port.

h. Operating a signal corps repair service for radio, wire and other communication equipment for the entire command, with the following exceptions:

(1) In general, all units will be responsible for the first and second echelon repairs to all communication equipment issued to them.

(2) Responsibility for the repair of communication equipment issued to them rests with the Air Corps.

i. Photographic coverage of force activities.

(1) Special photographic units have been organized to cover all phases of action in Force 343. The personnel of these photographic units will carry special identification. Commanding officers will allow photographers complete freedom of movement, and render them all possible assistance in the performance of their assigned tasks. Photographic censorship will be exercised by the War Department and not by unit censorship; however, the shipment of photographic films and prints from a zone of operation will be cleared through Headquarters Force 343.

(2) For details see Appendix "D" attached.

j. Establishing and maintaining a pigeon communication is set out in Appendix "E" attached.

SECTION III

OPERATIONS

7. Sub-Forces under Force 343.

a. II Corps

(1) Signal Corps Troops.

(a) During voyage, headquarters in Ancon.

1	Signal Officer, Lt. Col. Grant A. Williams		
2	In D plus 4 follow-up	Pers.	Veh
	53rd Sig Bn	932	249
	Det. 206th Sig Co(Depot)	25	2
	Total	957	251

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b. CENT Force

(1) Signal Corps Troops.

(a) During voyage, Headquarters in Ancon.

1. Signal Officer, Lt. Col. Hott, 45th Division.

2. Units in assault	Pers.	Veh
45th Signal Co	226	56
Det. 163rd Sig Photo Co	7	1
Broadcasting Det	3	—
74th Sig Co (Spec)	202	25
Total	438	82

3. In D plus 4

Det. 206th Sig Co (Dep) 25 2

c. DIME Force

(1) Signal Corps Troops

(a) During voyage, Headquarters in Samuel Chase.

1. Signal Officer, Lt. Col. George Pickett, 1st Div.

2. Units in assault.		
1st Signal Company	226	56
Det 163rd Sig Photo Co	7	1
Det 177th Sig Repair Co	21	6
Det 286th Sig Co (Spec)	118	3
Broadcasting Det	3	—
Total	375	66

d. JOSS Force

(1) Signal Corps Troops

(a) During voyage, Headquarters in Biscayne.

1. Signal Officer, Lt. Col. Brooke, 3rd Division.

2. Units in assault		
3rd Signal Co	226	56
Det 177th Sig Rep Co	21	6
Det 163d Sig Photo Co	7	1
71st Sig Co (Spec)	195	15
Broadcasting Det.	3	0
Total	452	78

3. D plus 4 follow-up

Det 206th Sig Co. (Dep) 25 2

e. KOOL Force (Floating Reserve)

(1) Signal Corps Troops

(a) During Voyage, Headquarters in ORIZABA.

1. Signal Officer, Major Carmon Clay, 2d Armd Div

2. Units in the assault		
142d Sig Armd Co	256	51
Det 26th Sig Co	49	—
Total	305	51

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18

8. The SOP for the Signal Services.

a. The Signal Services within the DIME, JOSS, and KOOL forces are to install, operate and maintain communications in accordance with the Signal Annex Plan of Communication to the FAITC Invasion Doctrine, and such communications afloat and ashore within each force as are hereinafter specified or prescribed in SOP.

b. The Signal Services within the CENT force are to install, operate, and maintain communications in accordance with the Joint U.S. Air-Amphibious Communications Instructions and such communications afloat and ashore within the force as are hereinafter specified or prescribed in SOP.

9. Air Communications.

An outline of the Air Communication plan for all forces is set out in Appendix I, attached.

10. Detailed Signal Plan.

a. Message Centers to be operated on a continuous basis:

(1) In each headquarters ship from the day of embarkation until all elements of each force are landed. The message center to be jointly operated. For detail of military personnel, see Appendix "F" attached.

(2) At Force 343 Headquarters, Command Posts of major units, and Regimental Combat Team Headquarters of assault regiments from the time of establishment on shore.

(3) At principal Shore Party Command Posts from the time of establishment on shore, until ordered to close by Force 343.

b. Scheduled Messengers.

As soon as the roads have been cleared, scheduled messenger service will be established between all major units, and the messengers will leave these major units three times daily.

c. Special Messenger.

A special messenger will be held in readiness at all times from the time of establishment of the Headquarters of Force 343 ashore. It will be used sparingly so as to enable the maximum number of troops to be engaged on tactical missions. Every effort should be made to use the scheduled messenger service. Only in case of

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19

emergency or a strictly urgent message will the special messenger be used.

d. Radio Communication.

(1) Radio silence.

(a) No radio set will be allowed to switch on during the voyage. Communications officers will be personally responsible that this order is carried out, and will take steps to bring to the notice of all radio operators that infringement of this order may jeopardize the safety of the entire convoy.

(b) Radio silence may be broken when landing troops are ashore, or when the element of surprise is lost, or in an extreme emergency during the ship-to-shore movement on the authority of the Commanding General, Force 343.

(2) Batteries.

(a) Every radio set operated from dry batteries will land with new batteries installed and three new sets of batteries as spare. These spare sets of batteries will be carried in a watertight container. No time expired batteries will be used.

(b) Storage batteries will be fully charged prior to embarkation.

(3) Waterproofing.

(a) Radio sets will be stored aboard ship in the driest and coolest possible place. Communications officers will give this matter their personal attention.

(b) Every portable radio set, combat loaded, will be enclosed in a watertight container. Special canvas bags are issued for this purpose. These bags will not be removed until radio sets are landed, except in the case of those radios which may be required to operate during the ship-to-shore approach movement, and for the purpose of inserting new batteries prior to embarkation into landing craft. These waterproof bags will be collected and turned in to division signal companies at the conclusion of the assault phase, and held pending orders this headquarters.

(4) Call Signs

(a) Individual call signs will be assigned to Force 343 troops. They will be changed as directed.

(b) Blocks of call signs will be assigned in accordance with the Army Code Sign System (See item to S.O.I. for the assignment of Call Signs.)

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(5) Frequency Allocation

See S.O.I. item 3b-2.

(6) Detailed Description of Radio Channels

See Appendix "G" attached.

(7) Radio Procedure

(a) "Combined Radio Telegraph (W/T) Procedure", short title, C.C.B.P.I. will be used by all army ground forces, U.S. and British, taking part in the operation "Husky" for

1. Combined use; that is when working to other service of the other nation.

2. Joint use; that is when working to other services of the same nation.

(b) Combined Operating Signals, short title C.C.B.P. 2 ("Q" Signals) will be used in all units.

(c) Link Sign will not be used in cases (a) 1. and (a) 2. as mentioned above.

(d) Link sign procedure combined with C.C.B.P. 1 (AFHQ Signal Instruction #48) will be used by all units within the allied ground forces. It will not be used on fixed wireless stations.

(e) For Force 343 higher net procedure see "Radio Schedules for "HUSKY" in appendix "G" to the Signal Annex.

e. Wire Communication

For detailed wire plan see Appendix "J" attached.

f. Visual Communication

(1) (a) During the voyage intercommunication between ships will be by visual methods and will be the responsibility of the Navy. Naval Signal Officers will provide such visual operators as are required to ensure sufficient visual facilities between ships.

(b) During the assault phases visual communications, including pyrotechnics, used between the beaches and seaward will be by prearranged signals the coordination of which will be the responsibility of Division Commanders. Coordination will include all adjacent units in order that there can be no misunderstanding of signals.

(2) Panels

(a) The only panel displays authorized are illustrated in Signal Operation Instructions, item 2h-1. Normally these displays will be by prearrangement or will be requested by radio.

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(b) If it should become necessary for a low-flying friendly airplane to ask for "Ground Panel Display" in order to know where to drop a message or supplies, the plane will signal by throttling the motor twice or by releasing a green very light. Any panel display made will be removed and concealed immediately after the plane has acknowledged by "rocking" or has passed on beyond the area concerned.

(3) Pyrotechnics

(a) Pyrotechnics signal within a division will be prescribed and coordinated by the Division Commander.

(b) Signals are of little value except for a specific operation when the approximate time and location from which the signal is to be released are known. Usually such signals can be used but once as both the signal and the resulting action of our troops will be observed by the enemy who may send up the same or a conflicting signal in order to confuse our troops and nullify the meaning of the original signal.

(c) In all cases the intended use of pyrotechnics signal will be made known to all friendly troops to whom the signal may be visible.

(4) Krypton

(a) The use of Krypton Lights, where available, will be coordinated by the Division Commanders.

(b) If used between air and ground Krypton signals will be coordinated with and made known to all friendly air and ground units operating in the area of visibility.

(5) Smoke

(a) The air-to-ground request for friendly troops to show yellow smoke will be a white very light from aircraft. (not to be confused with the Krypton light.)

(b) Ground-to-air recognition will be yellow smoke grenades or flares. Yellow flares or smoke will not be used for any other purpose.

g. Authenticator System

Authentication will follow the procedure set down in S.O.I. item 2d using the keys therein. Corps and Divisions will make up their own keys following the general system used by Headquarters Force 343.

h. Codes and Ciphers

Designation and distribution of codes and ciphers use between services and between higher headquarters will be found in S.O.I. item 2c.

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i. Radio Intelligence

(1) Radio intercept and direction finding missions will be carried out by detachments of the 128th Radio Intelligence Company with Force Shark, Force Joss and Force 343. These detachments will work under the direction of the Signal Intelligence Service who will maintain close liason with the G-2's of their respective organizations.

(2) Information gathered by radio intercept and position finding will be submitted to G-2.

j. Counter Signal Intelligence Measures.(1) Wire

(a) Field and open wire lines and cables will be patrolled completely and frequently to guard against tapping. Captured commercial wire lines will be completely isolated from outside connection before being put into use. It is quite possible to send false messages over wire lines.

(2) Radio

Enemy intercept and direction finder operations can be counteracted by:

- (a) Limiting transmitting power to the minimum required.
- (b) Limiting transmission time to minimum and breaking necessary long transmission into short irregular intervals.
- (c) Locating transmitters away from command posts and other important installations.
- (d) Using prescribed radio procedure exactly and without variations.
- (e) Adherence to rules of cryptographic security.
- (f) Constant monitoring of nets and strict enforcement of radio discipline.

(3) Radio Ruses

Fake messages and fake stations must be guarded against by authentication procedure on all messages and marking of those not authenticated.

(4) Jamming

(a) Enemy interference on our radio channels is avoided by:

1. Rapid shift to alternate frequencies while

DECLASSIFIED

23

continuing to transmit, if possible, on original frequency.

2. Use of tone modulation where possible, or of C.W. instead of voice.
3. Training of operators to copy through interference.

(5) Intelligence information to other services will be transmitted through established radio channels.

k. British officers on Liaison Duty with Force 343 "J" Service.

The following British Officers will be on duty with Force 343 assisting in the supervision of the "J" service:

Capt. F.W.A. Allen	R.A.C.
Lt. G.F. Cox	Royal Artillery
Lt. T.B. Wilcox	Royal Artillery
Lt. J. Burgess	R.A.C.

1. Naval Fire Control Parties.

a. Fire control parties will be attached to each assault battalion. Each party will consist of one naval officer, radio operators and two SCR 284 Radio sets.

2. Fire support ship-shore has been assigned as follows:

<u>DIME FORCE</u>	<u>CENT FORCE</u>	<u>JOSS FORCE</u>
CL USS SAVANNAH	CL USS PHILADELPHIA	CL USS BROOKLYN
CL USS BOISE	19 DESTROYERS	CL USS BIRMINGHAM
9 Destroyers	HMS ABERCROMBIE	9 DESTROYERS
		9 L.C.G.
		8 L.C.F.

3. For Naval Fire Support frequencies see SOI.
General fire support frequency is 5640 Kcs.

m. Air Support Parties

Air support parties will be furnished by the 12th Ground Air Support Command as follows :

Force 343	- 2	45th Inf Div	- 2
II Corps	- 1	2nd Armd Div	- 2
1st Inf Div	- 2	82nd Airborne Div	- 1
3rd Inf Div	- 1		

n. Military Personnel for Hq. Ships.

See Appendix "F" attached.

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24

O. Communication Isolation Plan

- (1) Radio broadcast and communication stations will be located on operation maps in the hands of all units down to include Battalion Commanders.
- (2) Radio communication will be interrupted as soon as possible and with least possible damage to the equipment. Attack will be directed to power and antenna installations rather than transmitter equipment.
- (3) Wire communications will be disrupted as outlined in appendix "J" attached.

SECTION IV

ADMINISTRATION

11. General - See the G-4 Administrative Order, that accompanies the Field Order, for general directives and service plans indicated therein for details.

12. Motor Vehicles

- a. All Signal Corps units are being equipped according to T/BA or appropriate T/E.
- b. In addition, each headquarters, Force 343, Shark, Dime, Cent, Kool, and Joss is being equipped with two DUKWS with SCR 299 installations. These will revert to the control of Force 343 when organic SCR-299 sets are received.

13. Supplies

a. Class III. Gasoline and Lubricants.

The Quartermaster is providing gasoline and lubricants aboard each assault and follow-up convoy to maintain the participating units. This material will be provided all Sub-Task Forces. Signal detachments and units will obtain these materials from the units with which they are operating. No white gasoline will be provided. An equivalent may be obtained by filtering leaded gasoline through 18 inches of steel wool or several thicknesses of cloth.

b. Class IV

(1) Cryptographic

All regular cryptographic systems and/or devices for communications between higher headquarters (Division and higher headquarters)

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25

will be supplied by A.F.H.Q. Distribution will be made by Force 343.

(2) Photographic

See Appendix "D" for list of special photographic equipment additional to that provided in T/BA for the detachments of the 163rd Signal Photo Company.

(3) Wire

A plan for fixed wire installations and systems for this operation is in the course of preparation. Equipment for fixed wire installations will be laid down in North Africa and be ready for shipment to destination on call after D-Day as the situation develops.

14. Shipment of Supplies

Initial and 7-day maintenance equipment will be carried along with the troops. Each 1st and 2nd Follow-up convoy will carry seven days maintenance for the troops already at the destination. 15-day reserve maintenance will be ready on call in the event port facilities will not permit the direct discharge of materials in Sicily from UGS-11 Convoy. Further maintenance supplies will be shipped from the New York Port of Embarkation direct to Sicily. A thirty-day reserve and a ten-day working level will be maintained in the depots.

15. Signal Depot

- a. Location: To be determined later.
- b. Troops: 206th Signal Depot Company.
- c. Signal Property Officer: Captain John M. Tallman, Commanding Officer, 206th Signal Depot Company.
- d. Mission: To establish, maintain, and operate a Signal Depot at the destination for the receipt, storage and issue of Signal Corps equipment, materials, and supplies.
- e. Stockages:

(1) Initial - 7 days maintenance carried by units plus 7 days maintenance on first follow-up plus 7 days on second follow-up to be maintained in beach dumps by Storage and Issue Section of the Signal Depot Company.

(2) Levels - 30 days reserve plus ten days working margin to be maintained by necessary requisitions.

16. Marking of Supplies.

- a. Unit equipment and supplies will be marked with their overseas shipment number.

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26

- b. Maintenance supplies for over-beach discharge will be marked with:

- (1) Port to be shipped from
- (2) Signal
- (3) Class of Supply (i.e. Class II or Class IV)
- (4) KKK
- (5) Number of phased requisitions.
- (6) Initial of Sub-Task Force Code Name.

Example: CAVI-SIC-II-KKK - I - J
(1) (2) (3) (4) (5) (6)

- c. Subsequent supplies coming from United States will be marked with:

- (1) Port to be shipped to.
- (2) Has no significance to the force
- (3) Branch of service requisitioning
- (4) Class of Supply
- (5) Signifies BIGOT-HUSKY
- (6) Has no significance

d. (1) Signal supply will be marked with the usual orange band around the sides and ends of the boxes.

(2) Packing slips or stenciled markings on outside of boxes will designate contents. These will not be removed by other than Signal Depot Personnel.

SECTION V

COMMAND

17. SIGNAL OPERATION INSTRUCTIONS

a. Initial sets of SOI's will be prepared by Commanding Generals of Forces, Shark, Joss, Kool, Dime, and Cent by 18 June, 1943.

b. Two copies of all SOI's will be furnished to the Signal Officer, Force 343.

c. Except for the following the form of all items of SOI is left to the discretion of the Commanding Generals of the Sub-Task Forces.

- (1) Codes and Ciphers including keys will be in accordance

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27

with the materials furnished (See current Index to SOI)

(2) Radio call signs and frequencies

(a) Tactical Radio Net Operations, see Appendix "C" attached, and SOI.

(b) The cable address of Force 343 will be announced later.

18. a. The II Corps Signal Officer will be designated as the Signal Officer Shark Force.

b. The Divisional Signal Officer of the 1st Infantry Division will be designated as Signal Officer of the Dime Force.

c. The Divisional Signal Officer of the 45th Infantry Division will be designated as Signal Officer of the Cent Force.

d. The Divisional Signal Officer of the 3rd Infantry Division will be designated as the Signal Officer of the Joss Force.

e. The Divisional Signal Officer of the 2nd Armored Division will be designated as the Signal Officer of the Kool Force.

By Command of Lieutenant General PATTON:

HOBART R. GAY,
Colonel., G.S.C.,
Chief of Staff.

OFFICIAL:

/S H. C. MADDOX,
Colonel, G.S.C.,
A.C. of S, G-3.

HEADQUARTERS FORCE 343
c/o I Armored Corps, Rein
A. P. O. # 758

SECRET
Authority of
CG, Force 343
Initials _____
Date 18 June 43

APPENDIX "A"

List of Existing Fixed Radio Stations

<u>Place</u>	<u>Call Sign</u>	<u>Freq.</u>	<u>KCs</u>	<u>Power KWs</u>	<u>Position and Details</u>
Corleone	-	-	-	-	Italian Military equipment. No fixed station located, but a part of the 41s Coy Teleradio which is here presumably has mobile W/T equipment.

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28

<u>Place</u>	<u>Call Sign</u>	<u>Freq. Kcs</u>	<u>Power Kwa</u>	<u>Position and Details</u>
Palermo	11PA	M.F. 365	3	Broadcasting equipment at: 38° 06' 31" N 13° 19' 42" E
Palermo	IAI	H.F. 3113.5	-	Postal System 38° 06' 31" N 13° 22' 00" E Near Pote Agata
Palermo	-	H.F. 7980	-	I.A. F. 38° 06' 03" N 13° 19' 01" E ½ mile south of BOCCA DI FALCO airfield at CAMASTRA, in S.E. angle of road from PALERMO meeting a road running South from CAMASTRA. PALERMO/BOCCA DI FALCO W/T Stn Link to Catania, Siracusa, Pantelleria.
Palermo	-	M.F. 333	-	D/F on airfield; to south of perimeter.
Palermo	-	H. F. 5230 5700 4348	-	I.A.F. Air H. Q. Sicily. Unlocated.
Palermo	-	-	-	Question as to nature - may be the station above. 38° 06' 07" N 13° 20' 33" E In S.W. outskirts of Palermo in the BK (either CASERNO GUBA or CASERNE EUCLIDE TURBA) which are on the N. side of the road PALERMO - PIANO DEL GRECI.
Palermo	-	M.F. 171.4	-	Italian Military to MESSINA, Sira- cusa, Trapani, Unlocated.
Palermo	-	-	-	May be the station above 38° 07' 10" N 13° 21' 23" E In CASERNO RUGGERO, on PIAZZA S
Palermo	-	-	-	S. FRANCESCO DE PAOLA; S.E. of LOLLI Railway Station.

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29

<u>Place</u>	<u>Call Sign</u>	<u>Freq. KCs</u>	<u>Power KWs</u>	<u>Position and Details</u>
Palermo	-	-	-	May be the station two above. 38° 06' 40" N 13° 21' 38" E
Palermo	-	-	-	In Prefecture, on GCUS VITTORIO EMANUELE, adjoining on E. side CASERNO CALATAPIMI
Palermo	-	-	-	Naval. Unconfirmed on MONTE PELLERGRINI (N. of Palermo)
Palermo	-	-	-	38° 12' 00" N 13° 15' 30 (approx) E PUNTA MALESE, NW of PALERMO, SW of CAP GALLO. In Center of Point where road makes a sharp bend around point. No details.
Trapani	ICP	M.F./H.F. 153.6)) 3805)) Naval 5438)) 8615)) 439)) 500)) Coastal 120))	5	Naval/Coastal 37° 59' 03" N 12° 32' 47" E 1000 yds NW PAGHECO and 2½ miles SE TRAPANI, in angle formed by CANAL DE BAJUTA to North and the railway to MARSALA to the South.
Trapani	-	H.F. 3000-6000	-	G.A.F. 38° 00' 56" N 12° 35' 29" E Band to TAORMINA, ELMAS, PANTELLERIA, Most German occupied SICILIAN airfields, ROME and Air Ground traffic TRAPANI/MILO airfield at BORGO ANNUNZIATO, 300 yds due N of NW corner of perimeter, just N of main road to CALATAPIMI which skirts airfield. Adjoins Barracks.
Trapani	-	-	-	Known equipment: 1 Fu.Ge.III; 1 Fu.Ge. X 1 70 W Transmitter (?)
Trapani	-	M.F./H.F.	-	G.A.F. D/F probably as above.
Trapani	-	M.F.171.4 250	-	Italian Military unlocated to Palermo, Siracusa, Messina

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Place	Call Sign	Frequency	Power	Position and Details
Trapani	-	-	-	<p>May be the same as above: $38^{\circ} 00' 58''$ N $12^{\circ} 33'$ E At W end of the town, past end of houses on N side of peninsula leading to TORRE LIGNY and VILLONEUVO NASI</p>
Trapani	-	-	-	<p>Coast Artillery (?) $38^{\circ} 03' 20''$ N $12^{\circ} 34'$ E</p> <p>NNE of town, circa 2100 metres NNW of ERICE and CIRCA 1050 metres SE of POINT PIZZOLUNGO. In general area of M. GIULIANO. Adjoins a semaphore stn, and fire control post 500 metres to the E is a gun position or battery.</p>
Marsala	-	5700	-	<p>I.A.F. $37^{\circ} 52' 00''$ N $12^{\circ} 29' 00''$ E MARSALA STAGNONE Seaplane base N of MARSALA. On coast due W of CONSO village, facing SALTERNS Safety Service and air/ground tf.</p>
Marsala	-	333 (?)	-	<p>D/F. Unlocated. Italian and GAF</p>
Marsala	-	-	-	<p>$37^{\circ} 48'$ N $12^{\circ} 28'$ E Area S of SALINA LAZZARA and E of SALINA POLLARI. GAF Beacon.</p>
Marsala	-	-	-	<p>Italian Military. Unlocated. Unconfirmed.</p>
Marsala	-	-	-	<p>$37^{\circ} 47' 35''$ N $12^{\circ} 26' 25''$ E In angle formed by RR running S into MARSALA and NE houses of MARSALA.</p>

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31

<u>Place</u>	<u>Call Sign</u>	<u>Freq. Kcs</u>	<u>Power Kws</u>	<u>Position and Details</u>
Castel) Vetrano)	-	M.F. H.F. 6400-7200 - 5700 400	-	G.A.F. I.A.F. to TRIPOLI and PAN- TELLERIA Safety Service and air/ground W/T R/T. Unlocated. Probably near airfield.
Sciacca	-	H.F. 3000-6000	-	Band to TAORMINA, German oc- cupied Sicilian and Sardinian airfields. Unlocated. Prob- ably near an airfield.
Sciacca	-	-	-	DEADMETER. Set up mid-November 1942. D.M. links PANTELLERIA and TUNIS, or to TUNIS via PANTELLERIA. Unlocated.
Porto) Empedocle)-	-	H.F. 3000-7000	-	GAF to TAORMINA, and all Med Naval and Air H.Q. Day - Naval link to ROME. Night- AUGUSTA, BIZERTE, TUNIS. Unlocated.
Licata	-	-	-	Cira 37° 5' 50" N 13° 56' 35" E On a hill overlooking the port between CASTLE S. ANGELO (to N or NW) and cemetery (to S or SE). No other details
Gela	-	-	-	RDF. Possible long range FREYA 37° 04' 08" N 14° 12' 20" E
Gela	-	4000 3000-5000	-	I.A.F. Main control of R/T Air/Ground
Gela	-	-	-	G.A.F. band to CATANIA, PECHINO, GERBINI, BISCARI, SAN PIETRO, REGGIO, Unlocated. Probably near an airfield.
Vittori	-	M.F. 476) 500) 418) 5025)	1	To shipping. Coastal Met. Broad- casts: 36° 56' 49" N 14° 31' 24" E On W outskirts of Vittoria on S side of Main road to RIGLIORI

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32

<u>Place</u>	<u>Call Sign</u>	<u>Freq. KCs</u>	<u>Power Kws</u>	<u>Position and Details</u>
Vittori	-	-	-	Beacon 36° 56' N 14° 30' E No other details
Comiso	-	3000-6000	-	GAF band to TAORMINA, German occupied airfields and operational groups in Central Med Area. M.F. Air/Ground t/c. IAF Air/Ground (W/T) 36° 58' 45" N 14° 35' 39" E 2 1/2 miles NNW COMISO and about 3/4 mile SW airfield on E side of road COMISO to airfield, just S.E. of junction of this road with VITTORIA-airfield road BEAM approach-Aligned on COMISO airfield N.E. - SW Runway, with Visual Lorenz.
Biscari) - San Pietro)		H.F. 3000-5900		GAF. Band to CATANIA, GERBINI, GILA, PACHINO, REGGIO, M.F. air/ground. Unlocated. Probably near landing ground.
Cap Passero -		H.F./M.F.	/ -	GAF D/F. Unlocated

By Command of Lieutenant General PATTON:

HOBART R. GAY,
Colonel, GSC,
Chief of Staff.

OFFICIAL:

/s/ H.G. Maddox
H.G. MADDOX,
Colonel, G.S.C.,
A.C of S, G-3

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33

HEADQUARTERS FORCE 343
c/o I Armored Corps, Rein.
A. P. O. # 758

S E C R E T
By Authority of
CG, Force 343
Initials _____
Date 18 June 43

APPENDIX "B"

"Enemy Wire Communications"

1. General

a. Telephone long distance lines and all telegraph lines are owned and operated by the government.

b. The local telephone systems are owned and operated by the Società Esercizi Telefonica (S.E.T), and independent company with a high degree of government control.

c. There are often two exchanges in one town, one for long distance and one for local calls. In some towns the long distance exchanges are in the main Post Office Building.

d. Special units of the militia have been training in guarding the telephone and telegraph systems. It can be assumed that these guards are also trained in the destruction of the equipment so that extensive damage can be anticipated.

e. The enemy is known to make special efforts to mine and booby-trap communication equipment, so extra precautions must be taken to prevent casualties to personnel from these agencies.

2. Telephone exchanges

a. Automatic

The cities listed below have automatic exchanges, using equipment of the rotary type. The equipment was probably provided by Ericsson Company of Stockholm:

<u>City</u>	<u>Location of Exchange</u>	<u>No. of Lines</u>
Agrigento	P.T.T. Piazza Emanuele	500
Galtanissetta	P.T.T. Via Francesco Crispi	1000
Catania	Palazzo P.T.T. Via Etnea (S.E. Corner of Giardino Bellini)	7000
Marsala	Probably in Via Garibaldi	500

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34

<u>City</u>	<u>Location of Exchange</u>	<u>No. of Lines</u>
Messina	Palazzo P.T.T. Piazza Cavour	4000
Palermo	Palazzo P.T.T. Via Roma	9000
Siracusa	Palazzo P.T.T. (North Corner of Ortica)	1000
Trapani	Palazzo P.T.T. Piazza Cavour	1000

b. The cities listed below have common battery exchanges:

<u>City</u>	<u>No. of Lines.</u>
Modica	200
Enna	100
Giarre	100
Piazza Armerina	100
Ragusa	100
Sciacca	100

c. Other cities and towns have common battery magneto type exchanges, but no data is available as to size or type of equipment. In many of the smaller localities, Ericsson (Swedish) type multiple relay exchanges have been installed. It is believed that up to 1940, 180 installations of this type were supplied to the S.E.T. and that those supplied for use in villages were of 10 lines capacity, and were installed in the homes of the local Priest.

d. Trunk Exchanges

The location of the following trunk exchanges are known:

<u>City</u>	<u>Location</u>
Palermo	Via Polacchi 127
Messina	Via Delle Rovers
Catania	Palazzo P.T.T. Via Roma

3. Submarine Cables - Submarine cables exist between the points listed below:

a. Punta Mazzone

(1) Cable Hut or Landing Point

Map Ref. Sheet 254 IV N.E. 435649, at or close to lighthouse known as Torre Bianca. It is possible that a cellar of the tower is used as a Cable Hut.

(2) Cables

Four (4) cables to Bagnara (Calabria). These cables carry the main telegraph circuits to the mainland. It is known that in

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1940 an S.T. & C. channel carrier system was used between Messina and Naples, and it is possible that it was carried over the Straits of Messina by these cables.

One (1) cable to Fiumicino (Roma). This cable probably carried the Italcable Co. high speed telegraph circuit Messina - Roma.

b. Punta Mazzone

Cable Hut or Landing Point

Map Ref. Sheet 254 IV N.E. 438649, approximately 350 yards east of Torre Bianca.

One (1) Telegraph Cable to C. Chieme (Calabria)

One (1) Telephone Cable to C. Chieme (Calabria)

There is a possibility that a carrier system is used on the above cables.

NOTE: In 1940 the circuits carried on the above cables were extended to Messina by O.H. lines. There is a possibility that these lines are now replaced by U.G. cable.

c. Milli Marine

Landing Point

Map Ref. Sheet 254 III, C7474

Three (3) telephone cables to Reggio Calabria

One (1) Cable, 3 quads for 2 wire circuits

One (1) Cable, 3 quads for 2 wire circuits

One (1) Cable, 3 quads plus one screened pair for two wire circuits and radio.

The above cables are unloaded (7 x 0.5 conductors) and carry the through circuits from Sicily to the mainland on 2 wire basis. A carrier system (type not known) is used on these cables. The cables are lead straight into the basement of the repeater station and terminated on a panel in the repeater apparatus room.

d. Siracusa - Punta Asparano

Cable Hut

Map Ref. Sheet 277-I-NW 126230

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36

One (1) Cable to Benghazi
One (1) Cable to Tripoli

NOTE: It is reported that the Tripoli cable is cut approximately 1830 ohms (say 230 miles) from Tripoli and the sea earth is broken.

e. Siracusa - Cappucini Bay

Cable Hut or Landing Point

Map Ref. Sheet 274 II SW 154320 (Approx)

One (1) Cable (Coastal) to Augusta, Catania, Messina

f. Pozzalo

Cable Hut

Map Ref. Sheet 276 II SE 765929

Two (2) Cables to Malta

The Cable Hut is at the east end of a sand beach which extends 750 yards east of the town to a low cliff. It lies 50 yards back from the sea in a low sandy bank. The cable lands just west of rocks lying at the base of the low cliff.

g. Porto Empedocle

Cable Hut

Map Ref. Sheet 271-IV-NW 577545 (approx)

One (1) Cable telephone to Pantelleria - Limosa - Lampedusa - Tripoli

It is not certain if this cable is in operation or not. It is reported that the first section was manufactured, but not laid, in 1940. It is probable that it has been laid as far as Lampedusa. The repeater station associated with this cable was to have been 750 yards from the cable hut.

h. Mazara

Cable Hut or Landing Point

Map Ref. Sheet 275-IV-NE. Probable locations - 752958, 764953, 767948.

One (1) Cable to Pantelleria.

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This cable is reported cut by the French in 1940. It is most probable that the cable is working.

i. Marsala

Cable Hut or Landing Point.

Map Ref. Sheet 256 II 613127 (approx). Probably at base of Cape Lilibeo.

One (1) Cable to Isola Marettimo

j. Tramontana Point

Cable Hut or Landing Point

Map Ref. Sheet 257 IV 645244 (approx)

One (1) Cable to Favignana Island (Circuits extended to Levanzo Island)

k. Mondello Bay (N. of Palermo)

Cable Hut or Landing Point.

Map Ref. Sheet 249 - 412566 (approx)

The landing point is most probably close NE of Mondello Moles, where, facing E there is a parallel aided cut in the rocks 60 feet long and 10 feet wide.

One (1) Cable to Punta Anzio (Roma)

One (1) Cable to Cagliari (probably operated by Italcable Company)

Two (2) Cables to Napoli

One (1) Cable to Ustica (Isole)

l. Milazzo

Cable Hut or Landing Point

Map Ref. Sheet 254 - 088587 (approx)

Two (2) Cables to Isola Lipari

4. Underground Cable

a. One underground, government owned cable is known to exist. The cable is buried and not for 40 - 50 cm (2 - 2½ feet). Loading

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coils are placed in manholes at distances of 1800 - 1900 meters. These manholes have round covers, the only round covers reported in use in Sicily. The cable carries a number of telephone circuits, telegraph circuits, one radio circuit, and several special Army and Navy circuits. Known information is tabulated below:

Messina (*) - Mili Marina (R)	8 Km	24 quads
Mili Marina (R) - Catania (R)	89 km	49 quads
Catania (R) - Catania (R)	2.3 km	69 quads
Catania (R) - Raddusa (R)	59.7 km	39 quads
Raddusa (R) - Caltanissetta (R)	68 km	39 quads
Caltanissetta (R) - Caltavutro (R)	80	39 quads
Caltavutro (R) - Palermo (R)	65	39 quads

(R) Indicates Repeater Station

(E) Indicates exchange

(*) Cable terminal equipment only - not a repeater station.

b. Full technical details of the cables and repeater equipment is available. See Appendix "A", MIS/2573/7 and 8.

5. Aerial Cable

There are no known aerial cables.

6. Overhead Wire

a. Overhead wire is the standard method of construction. Wooden poles with metal crossarms are used throughout. Exact routes of overhead wire lines are not known, but probably follow main roads.

b. In general, telephone and telegraph lines are built on separate pole lines.

c. Distribution within cities is by means of open wire with supporting structures attached to building.

7. Railroad Lines

a. Railroad dispatch and control lines are of standard pole line construction along railroad right of way. Some dispatch circuits are telephone, but most of them are telegraph.

b. Railway dispatch lines are used for military control of armored trains and railway guns when these weapons are used.

8. Carrier Equipment

No information is available regarding carrier equipment.

9. Power Supply

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39

a. Power is supplied to domestic consumers at 150 volts, 50 cycles. Factories and large consumers receive power at 260 volts, 50 cycles.

b. There is no information regarding carrier voice channels over power transmission lines.

By command of Lieutenant General PATTON:

HOBART R. GAY,
Colonel GSC,
Chief of Staff.

OFFICIAL:

/s/ H. G. Maddox,
H. G. MADDOX,
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HEADQUARTERS FORCE 343
c/o I Armored Corps, Rein
A. P. O. # 758

APPENDIX "C"

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By Authority of
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Initials _____
Date 19 June 43

"Summary of Local Power Supply in Towns"

1. Hydro-Electric Resources.

a. The hydro-electric resources of Sicily, like those of other Italian Islands, have not hitherto been developed to anything like the extent of those on the mainland of Italy, although there exist plans to provide for considerable increases in capacity during the next few years.

b. Analysis of the output of hydro-electric plants in the Italian Islands as a whole shows that they are subject to wide seasonal variations. Seasonal percentages of the annual output have been as follows:

December- February	50%
March - May	40%
June - August	3%
September - November	7%

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In Sicily there is an additional obstacle to a highly developed hydro-electric system, in that many of the island's rivers are neither powerful nor accessible enough for building work to be other than a long and costly undertaking. Both in 1937 and 1938 the six important hydro-electric plants produced 70 - 75 million KWH, or about 35 percent of the island's total power production.

2. In order to regulate the supply of electric power throughout the year, a considerable output from thermal-stations is required from June until November, (inclusive). Of the six principal thermal generating stations in Sicily, several are relatively small capacity, but they are important for peak-load operations and for the local power supplies. The output from thermal stations was between 115 and 140 million KWH in 1937 - 1938; this gives a plant factor of about 3000 hours per year. Before Italy's entrance into the war in 1940, the coal for Sicily's thermal plants was imported from Great Britain, Germany or Poland. Now it presumably comes exclusively from Sardinia.

3. Power Stations:

a. Hydro-Electric

Alto Belice	11,000 KW
S. Carlo	7,000 KW
Francavilla (Alcantara)	5,600 KW
Cassibile	5,360 KW
Kaggi (Alcantara II)	4,800 KW
Poggio Diana	4,000 KW

b. Thermal Stations

Catania	25,450 KW
Palermo	13,800 KW
Porto Empedocle	10,000 KW
Trapani	1,180 KW
Messina	750 KW
Siracusa	300 KW

4. Characteristics of Power Supply

a. For industrial use power is supplied as follows:

260 volts
50 cycles
3 phase

b. For domestic use power is supplied as follows:

150 volts
50 cycle
3 phase

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5. Sub-Stations:

Mazzarra S. Andria
 Archiand Bauso
 Messina
 Roccalumera
 Viagrande
 Capo Molini
 Catania
 Carlentini
 Sartino
 Siracusa
 Vizzini
 Bucchere
 Ragusa
 Salermi
 Porto Empedocle
 Caltanissetta

By command of Lieutenant General PATTON:

ROBERT R. GAY,
 Colonel, GSC,
 Chief of Staff.

OFFICIAL:

/s/ H.C. Maddox,
 H. B. MADDOX,
 Colonel, GSC,
 A C of S, G-3

HEADQUARTERS FORCE 343
 c/o I Armored Corps, Rein.
 A. P. O. # 758

S E C R E T
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 Date 22 June 43

APPENDIX "D"

"Photographic Plan"

1. a. Four photographic units will accompany Force 343
- b. Each unit consists of one officer cameraman, and six enlisted

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cameramen. Each expert with still and motion picture cameras. The units will be so organized for the assault, that the men will be equipped with the following:

Two men will carry 35mm motion picture cameras, with black and white films.

One man will carry a 16mm motion picture, magazine loading, camera with color films.

Three men will carry 4 x 5 Speed Graphic cameras with 4 x 5 film packs, and a 35mm camera of the Leica type.

c. In the initial assault, each unit will be broken up into three two-man teams consisting of one still cameraman and one motion picture cameraman. Wherever possible, these teams will be deployed so that they will accompany a Divisional Combat Team. Each of these teams should be loaded on separate ships wherever possible.

d. Two $\frac{1}{2}$ ton 4 x 4 vehicles will be used by two of these landing teams in the initial assault.

e. One enlisted cameraman will remain with a vehicle which will have on it the extra film and initial laboratory equipment. This vehicle will arrive as soon after "D" Day as arrangements can be made for it.

By command of Lieutenant General PATTON:

HOBERT R. GAY
Colonel, GSC,
Chief of Staff.

OFFICIAL:

/s/ H. G. Maddox,
H. G. MADDOX,
Colonel, GSC,
AC of S, G-3.

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APPENDIX "E"

"Pigeon Communication"

1. a. A detachment (two officers and twenty enlisted men) from the Pigeon Platoon, Company "E", 829th Signal Service Battalion, will arrive by D plus 8, and will be attached to Force 343 Headquarters. This detachment will be employed as required as soon as the birds are settled.
- b. The Pigeon Platoon, Company "E", 829th Signal Service Battalion less above detachment, will arrive by D plus 20, and will be attached to Force 343 Headquarters. The Pigeon Platoon will be employed in accordance with the situation.
- c. Pigeon communication will be used as the tactical situation dictates. All message will be encoded. Except in emergency, pigeons will not be confined away from their home lofts more than three (3) days. When rapid communications is essential, pigeons will not be used if other means are available.

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HEADQUARTERS FORCE 343

23 MAY 1943

APPENDIX "F" TO SIGNAL ANNEX

Radio Channels, Equipment, and Personnel of Headquarters Ships.

For the Commanding General:

HOBART R. GAY,
Colonel, G.S.C.,
Chief of Staff.

OFFICIAL:

/s/ H. G. Maddox
HALLEY G. MADDOX,
Colonel, G.S.C.,
Asst. Chief of Staff, G-3.

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3d Div	21 - 22
45th Div	23 - 24
9th Div	25
82d AB Div	26 - 27
Sig O - 141	28 - 29
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APPENDIX G (Signal Annex for HUSKY)

Radio Plan for the Assault

1. Radio communication for the 45th Division assault landing (Ship-Shore) will be in accordance with Joint U. S. Air Amphibious Communication Instructions, dated 10 March 1943.

2. Radio communication for the JOSS and DIME Forces will be in accordance with doctrines developed by the Invasion Training Center, Fifth Army. (See attached diagrams, 1, 2, & 3.)

a. Prior to 'H' Hour radio silence is in effect.

b. At 'H' plus 10, each Company Commander lands with an SCR-536 (or SCR-511) radio station in the Infantry Battalion Command Net.

c. At 'H' plus 10, the Advance Navy Beach Signals Team lands and establishes an SCR-609 radio station in the Traffic Control Net.

d. At 'H' plus 15, a communications team lands in the third wave and establishes an SCR-284 radio station in the Naval Gunfire Control net.

e. At 'H' plus 15, the Shore Company Communication Team lands in the 3d wave and establishes an SCR-609 radio station with one channel operating in the RCT Command Net and the other channel operating in the Shore Battalion Command Net.

f. At 'H' plus 15, the Infantry Battalion Headquarters Communication Team lands in the 3d Wave, and establishes the following radio stations:

(1) An SCR-610 with one channel operating in the RCT Command Net; the other channel operating with attached units. These channels are in operation while afloat also.

(2) An SCR-284 operating in the RCT Command Net.

(3) An SCR-536 (or SCR-511) operating as control in the Infantry Battalion Command Net.

g. At 'H' plus 90, the RCT communications lands in the 8th wave

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46

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and establishes the following radio stations:

- (1) An SCR-608 in 1/4 ton amphibious truck with one channel operating as control in the RCT Command Net; one operating with Division Headquarters afloat; one channel operating each Infantry Battalion Channel, one channel operating with Shore Battalion Headquarters.
- (2) An SCR-284 radio operating as control in the RCT Command Net.
- (3) An SCR-284 operating in the Division Command Net.

h. At 'H' plus 90, the Shore Battalion Communications Team lands in the 8th Wave and establishes the following radio stations:

- (1) An SCR-609 radio station, with one channel as control in the Shore Battalion Command Net; the other channel operating with RCT Headquarters.
- (2) An SCR-284 operating in the RCT Command Net.
- (3) An SCR-284 operating in the Shore Regimental Command Net.

i. At 'H' plus 90, the Navy Beach Signal Team lands in the 8th Wave and establishes an SCR-284 radio station in the ship-to-shore Administrative Net.

j. At 'H' plus 120, the Air Support Party lands in the 12th Wave and establishes an SCR-299 in the Air Support Net.

k. Diagram 3 shows the Division Ashore.

3. Communications of higher echelons afloat are shown in Appendix F to Signal Annex.

- a. Diagram 4 shows the initial 343 radio communications ashore (Army)
- b. Diagram 5 shows final 343 radio communications ashore (Army).

4. Listening Watch - All ships radios sets operating on army or Joint Shore Party teams will open a listening watch at D minus 30 minutes.

5. Radio Silence will not be broken before the leading elements of the assault are ashore or extreme emergencies when authorized by the Senior Naval Officer of the command.

6. Responsibility of Commanders - It is essential that radios be landed to conform to "Radio Schedules" attached and Item 3b-1, S.O.I., Force 343.

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47

7. Radio will be replaced by wire as soon as possible during the operation. No unnecessary traffic or readability reports will be transmitted.

By command of Lieutenant General PATTON:

HOBART R. GAY,
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OFFICIAL:

/s/ H. G. MADDOX,
Colonel, GSC,
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CG, Force 343
Initials
Date 19 June 43

APPENDIX "J"

"Detail Wire Plan"

1. General

a. All equipment being carried by the forces will be in the best possible operating condition. All dry cells will be new and additional dry cells will be packed with the equipment.

b. Waterproofing - All switchboards, telephone, telegraph sets, reel units, batteries and tool kits will be waterproofed in accordance with existing instructions.

c. Full use will be made of telegraph to provide additional channels.

2. Communications in North Africa.

a. The 51st Signal Battalion, in the initial phase, will provide wire communications in North Africa for both the Force 343 Command Post and the Rear Echelon. If necessary, additional personnel and

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48

equipment can be supplied initially by the 229th Signal Operations Company.

- b. Long lines communications and communications in the embarkation area will be provided by Allied Force Headquarters.

3. Tactical Communications in HORRIFIED

a. Sub-Task Forces.

(1) Corps and Sub-Task Force Commanders are responsible for all tactical wire communications in their own areas. This includes responsibility for all wire communications required for Shore Landing Parties and Shore Beach Parties. They are also responsible for the proper use and conservation of existing wire facilities in their areas until such responsibility is taken over by Force 343.

(2) One Construction Company, less one Construction Section, of the 51st Signal Battalion will be attached to the JOSS Force prior to embarkation to supplement their organic signal troops.

(3) One Construction Section of the 51st Signal Battalion will be attached to the KOOL Force prior to embarkation to supplement their organic signal troops.

b. Force 343

(1) Force 343 will be responsible for wire communications to and between Sub-Task Forces.

(2) The following signal troops will be available to Force 343:

1st Armd Sig Bn (14 O and 229 EM on D Day) Balance D/4)
229th Sig Operation Company (D/8 to D/30)
51st Signal Battalion (less 1 Constr Co) (D/30)
2659th Sig Port Serv Co (Provisional) (D/30)

(3) The 1st Armored Signal Battalion will establish communication to Sub-Task Forces as soon as possible after getting ashore. Initial communications will be over field wire which will be replaced with a better type of construction as soon as the material becomes available. Initially, two talking circuits and one telegraph circuit will be provided to Sub-Task Forces.

(4) The 229th Signal Operations Company will take over any fixed communication installations which may have been started by the 1st Armored Signal Battalion to free the 1st Armored Signal Battalion to advance as the tactical situation changes.

(5) Communication to Twelfth Army will be established as soon as the situation permits.

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(6) In accordance with instructions from Force 141, at least one circuit will be built from Comiso to Ragusa for use by the RAF.

(7) Full use will be made of existing facilities in the area. Later as these circuits are no longer needed for tactical use, they will be used in the fixed wire system.

4. Fixed Wire Communications in HORRIFIED

a. Fixed wire communications will be established in accordance with wire plan published by Force 141.

b. Initially this plan will be as shown in Diagram "A". Later it is anticipated that additional fixed communications will be installed as shown in Diagram "B". These plans, however, are subject to change.

c. The greatest possible use will be made of existing poles and wire in establishing the fixed communication system in order to conserve line materials.

d. Material for use in establishing fixed wire communications will be under control of the Signal Officer, Force 343, and except in emergency will not be issued for tactical purposes.

e. Construction and operation of the fixed wire communications system will be done by the 51st Signal Battalion and the 229th Signal Operations Company. Additional construction will be available from time to time from the 1st Armored Signal Battalion.

f. The 2659th Signal Port Service Company (Provisional) will operate the various port installations that are established on a permanent basis.

5. Interruption of the Commercial Wire System

a. Known details of enemy wire installations are shown in Appendix "B", Annex No. 3, Operations Plans.

b. Advance units will be instructed to cut wire lines leading into enemy territory. This includes telephone, telegraph, and railroad dispatch lines. The near end of the enemy portion of such lines will be short-circuited and grounded.

c. Enemy central offices will be secured intact if possible. All troops will be instructed to remove all enemy personnel from the central offices and establish a guard over such installations. Power supply should be interrupted to central offices to insure that the enemy does not use this equipment. The minimum amount of damage should be done to

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50

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the central office equipment so that it can be readily restored for our use. Particular care should be taken to secure all records since this will greatly facilitate the reestablishment of communication. Signal Officers of the various units will make plans for taking over central offices as soon as possible after they are captured.

d. Every precaution will be taken to prevent losses to Signal Corps personnel from mines and booby traps while working on any type of enemy communication facilities.

6. Control of existing facilities.

a. Initially Sub-Task Force Commanders will exercise control over all existing commercial facilities in their areas. This control will later be exercised by Commander, Force 343, in order to coordinate the use of these facilities. Ultimately, Force 141 will take over supervision of all commercial communication facilities.

b. All existing communications will be closed down as soon as the installations are captured. Personnel will be removed from communication installations and guards posted.

c. Operation of all communication facilities captured will be by signal personnel of the Allied Forces.

d. Civilian personnel will not be allowed to use telephone or telegraph services. Local services may be reopened for military use in accordance with instructions from Signal Officer, Force 343.

7. Wire Supply

a. Normal supply channels will be used throughout the operation.

b. Units will be issued wire supplies on the basis of T/BA allotments insofar as these supplies are available.

c. Certain supplies are being received for the special projects involved in the fixed wire communications plan outlined in Par. 4. These supplies will be under control of the Signal Officer, Force 343, and will be issued only for the use intended. This equipment consists of following items:

Permanent line construction materials.
Rapid pole line material.
Spiral four cable.
Carrier telephone equipment.
Repeaters.
Switchboards.

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51

By command of Lieutenant General PATTON:

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Chief of Staff.

OFFICIAL:

/s/ H. G. Maddox,
H. G. MADDOX,
Colonel, GSC,
AC OF S, G-3.

HEADQUARTERS FORCE 343
c/o I Armored Corps, Reinf.
A. P. O. # 758

S E C R E T
By authority
of CG, Force 343
Initials _____
Date: 16 June 43

16 June 1943

APPENDIX "N"

AIR COURIER DISPATCH SERVICE

1. An air courier dispatch service was inaugurated by the signal section, I Armored Corps Reinforced on 8 June 1943. The primary object of this service is to furnish rapid dispatch service to all units of this corps and to higher headquarters located in North Africa.

2. The following personnel is assigned to this service:

- 1 - Officer in charge Air Courier Service - Lt. Colonel, Signal Corps. Part time only.
- 5 - Officer couriers - From Adjutant General section on special duty with signal section.
- 3 - Officers in charge of message centers located at Telergma air field and Bizerte.

3. The following is daily schedule of courier service:

- a. Mostaganem to Casablanca and return.
Leave Mostaganem -- Lv. 0600B Ar. 2000B
Arrive Casablanca - Ar. 1210B Lv. 1400B
- b. Mostaganem to Bizerte.
Mostaganem -- Lv. 0600B Ar. 2000B
Maison Blanche -- Ar. 1045B Lv. 1600B
Maison Blanche -- Lv. 1330B Ar. 1130B
Telergma -- Ar. 1500B Lv. 1000B

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52

Telergma	-- Lv	1515B	Ar.	0945B
Tunis	-- Ar	1800B	Lv.	0700B
Tunis		1815B	Ar.	0645B
Bizerte		2000B	Lv.	0500B

4. a. Use is made of the Air Corps, Air Courier planes and the Air Transport Service Planes for the air portion of the route.

b. Use is made of motor messengers from the various sub-message centers to the unit concerned.

5. A. Upon movement of the Corps Command Post to the Bizerte area, the courier service will be continued from that point on a slightly revised time schedule.

b. Upon movement of the Corps Command Post from Bizerte for the HUSKY operation, an additional daily air courier service will be inaugurated from the Corps C P to the Bizerte area.

By Command of Lieutenant General PATTON:

HOBART R. GAY,
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OFFICIAL:

H. G. MADDOX,
Colonel, G.S.C.,
A C of S, G-3

By authority of:
CG, Force 343
Date: 19 June 1943
Initials _____

HEADQUARTERS FORCE 343, c/o I ARMED CORPS, REIN.
A. P. O. # 758

19 June 1943

APPENDIX "O"

Radio Command Channels of Communication

1. Explanation:

The attached charts illustrate the possible radio command channels in the case that anyone or any combination of headquarters ships are sunk or damaged to the extent that all the radios fail to operate.

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53

2. Use:

These alternate channels will be used only in case of an emergency.

By Command of Lieutenant General PATTON:

HOBART R. GAY,
Colonel, G.S.C.,
Chief of Staff.

OFFICIAL:

/s/ H. G. Maddox
H. G. MADDUX
Colonel, G.S.C.,
A.C. OF S., G-3

[The 36 charts in question have not been reproduced here. Those interested can examine them in the original document. - S.L.J.]

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CHAPTER III

OPERATIONS TO 21 JULY 1943

This chapter and the one following will report the operations of the Signal Corps in Sicily in chronological phases, unit by unit. The narrative is as complete as the available documents permit.

A. 21 June - 10 July

The period between the issue of Field Order No. 1 of Force 343 (I Armored Corps, Reinforced) and D-day was marked by intensive work in the training and outfitting of each unit, the transporting of thousands of troops to their assembly area off the coast of Sicily, and the final preparation of rear establishments in North Africa.

¹
The 1st Armored Signal Battalion. On 24 June, 12 officers and 158 enlisted men under the command of the Battalion's Commanding Officer boarded LST #325 at Algiers. Radio, message-center, wire operation, and wire construction teams were included, to furnish communications at the Army CP to be established in Sicily. Among the equipments were two SCR-299's the Battalion had installed in special housings on DUKW's. About the same time, 13 enlisted men began to operate the message center on the U. S. S. Monrovia, headquarters ship for I Armored Corps, Reinforced (343); its complement was completed when 8 officers and 206 men from the Battalion joined the advance detachment on the

1. 1st Armd Sig Bn, Operational Report, Sicilian Campaign: Sec II, Log of Activities, 27 Aug 43.

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55

28th. Under this arrangement, the loss of one Army CP ship would not stop communications.

2

The 53d Signal Battalion. The 53d, Corps Battalion for II Corps, had no communications responsibilities during the waterborne phase of the invasion. Its attention was concentrated on the wire equipment and supplies brought along in quantity sufficient to provide a "normal Corps installation initially" plus some forward movement; the facilities in Sicily were known to be "very limited". The Battalion's assault vehicles carried unrecorded amounts of open wire repair materials and cable and it managed, despite the competition for shipping space, to load an additional 100 miles of Spiral-four cable. The first follow-up convoy was scheduled to bring 112 miles of W-110-B and 20 miles of Rapid Pole Line -- to furnish "a reliable Corps axis" in case no open wire was usable. ("This RPL material was never located in Sicily".)

The assault detachment of the 53d was dispersed among five LST's and two LCI's; the vehicles and their drivers, equipment, guards for cryptographic equipment, and skeleton radio teams being on the LST's. One construction team from "C" Company, attached to the 1st Division, travelled with it.

2. 53d Sig Bn, Report on Operation "HUSKY", Pt I, n.d.

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56

³
Company "A", 51st Signal Battalion. Company "A" less one section was assigned to the 3d Division. 18 men and 1 officer formed four wire teams to supplement the Division signal Company teams, the personnel of the 51st being attached to small combat teams of the assault force. The balance of the Company was held in reserve.

⁴
The 1st Signal Company. Tunisia conquered, no time was lost reorganizing the 1st Division for the next step. The 18th RCT was withdrawn and placed in reserve under Task Force control, while the Division was augmented by a special Combat Team comprising the 39th Engineer Regiment and the 1st and 4th Ranger Battalions. The mission of these troops was to land and to secure a beachhead including Gela and the airfield about six miles north of it.

All personnel and equipment were divided into four groups assigned one to each echelon: assault convoy, first follow-up convoy (D plus 4), second follow-up convoy (D plus 8), and balance follow-up convoy (D plus 12). The equipment and men serving the D-day contingent were split into two approximately equal groups, combat loaded on separate ships — the main and alternate floating Division CP's. The alternate CP ship was to be utilized not only as an emergency headquarters but also if desirable as an Advance CP landing its complement directly behind the regimental CP's.

3. 51st Sig Bn, Operation "HUSKY", Pt 1, 25 Aug 43.

4. 1st Sig Co - TAG, Report of Action, 5-31 July, 8 Aug 43, pp. 1-3.

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57

In the light of expected requirements for ship-to-shore communications prior to the landing of T/A equipment, for landing operations based on such equipment, and for operations to extend the beachhead, the D-day echelon was assigned eight officers, one warrant officer and 264 enlisted men. With them went two SCR-299's in DUKW's -- Corps links, two amphibious jeeps, and 52 other vehicles. The jeeps were supposed to carry SCR-608's for communication with regimental headquarters ashore. Only one was available, however, and a SCR-193 was substituted for the other. The amphibious 608 was given to the Alternate Division CP group since it was responsible for installing the Advance CP on the beach if one should be required.

To the first follow-up convoy were assigned the men and equipment essential to the supply and administration of the forces establishing the beachhead. The remainder was shipped on the other two convoys. The 128th/849th. For "Y" service (enemy intercept), the 128th Signal Radio Intelligence Company was divided into three operating detachments and a headquarters detachment. Detachment 1, with Detachment A of the 849th Signal Intelligence Service, was to serve Seventh Army; Detachment 3, with Detachment E of the 849th, 3d Division, Reinforced. II Corps was to have Detachment 2 of the 128th and the 53d Wireless Intelligence Section, loaned by the British to the American forces because the 849th could not furnish a third section.

Small advance parties were to accompany the assault forces while the bulk of the teams remained in the Bizerte area, all operations being coordinated through a control station. The advance parties

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were to be joined in Sicily by the others when a beachhead of 20,000 yards had been established, a stage expected to have been reached by D plus 20 (30 July).

The three units were set up according to plan on 20 June in the Bizerte area, but they were too far from the enemy to be very effective tactically; the main benefit was rather of a training character. The advance parties left late in June; and, also according to plan, "nothing further was heard from them until after the invasion".⁵

B. 10-12 July

The landings began on schedule, before dawn, 10 July, the 45th Division at Scoglitti, the 1st at Gela, and the 3d at Licata. By 0600B (0400Z) beachheads had been established two to four miles in depth, the paratroopers were assembled after scattered landings by noon, and the floating reserve became a landed reserve at 1800--following the 1st Division ashore near Gela. Enemy tanks and aircraft attacked on the 11th, but the Allied line was eight to fifteen miles inland the next day.⁶

The 1st Armored Signal Battalion. Aboard the Monrovia, Seventh Army CP afloat, a radio detachment of 1 officer, 12 operators, and 1 radio repairman operated and maintained both the Army sets and the Navy

5. Sic Opn, pp. 114-15; 128th Sig RI Co--Seventh Army, 21 Aug 43.

6. SCTIL No. 30, pp. 6, 8.

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SC 175907

Paratroopers advancing near Gela, D plus 1; note
SCR-511 (center) and SCR-536 (left)

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58

equipment installed by the Navy for Army use. There were stations in the Army Command net and "J"-service net, an administrative link, and two links to the Eighth Army--with American operators at that headquarters. (Attached British personnel, similarly, operated three British stations on the Monrovia.) Radio silence was lifted at 0305B, and despite crowded conditions and long hours, declares one source, "traffic was cleared with an efficiency and speed which left little to be desired".⁷ Another emphatically disagrees:^{7A}

The...evils of TORCH were again quite apparent--i.e., overclassification, "hogging" of circuits by the higher headquarters, interference, lack of previous training together of Signal personnel. Operational messages to Seventh Army from II Corps filed on the ANCON were delayed as much as 50 hours.

By 1600 a group of radio operators were at work ashore, and the 11th saw the establishment in Gela of eight monitoring sets--

7. 1st Armd Sig Bn--TAG, Report of Operation "HUSKY", Sicilian Campaign, 27 Aug 43; Sic Opn, p. 89.

7A. Written comments of Col. Grant A. Williams, 7 July 45. Col. Williams served in the campaign as Signal Officer of II Corps.

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four SCR-299's and four SCR-193's. At 1530 the next day these sets took over all nets from the Monrovia. All the nets established ashore, except the Seventh Army Command net and the administrative link from Army back to 15th Army Group, utilized low frequencies from 2000 to 0600 and higher frequencies at other hours.⁸

The rapidity of action ashore necessitated the one known departure from "established command channels": an Army set was operated directly in the II Corps net to furnish "early information", and "proved of inestimable value to the Army Commander".⁹ Why the "J"-service did not suffice is not clear.

Five officers and 37 men operated the Army message center on the Monrovia on D-day; D plus 1 saw the opening of a message center ashore; D plus 2, a new Army CP at Gela. Radio traffic reached 10,000 groups in the first twenty-four hours of operations, 22,000 in the third. One report states that all traffic was tactical; another, that the backlog of administrative messages from the period of radio silence swamped the message center. In any case, nearly all were URGENT and priority hard to determine. It was believed, moreover, that too many messages were flowing down the chain of command rather than up, and that they were in general "over three times longer than necessary". The Chief of Staff was able to reduce the burden of outbound traffic,

8. 1st Armd Sig Bn--TAG, 27 Aug 43; 1st Armd Sig Bn, Operational Rpt, Sicilian Campaign, Sec II: Log of Battalion Activities; SCTIL No. 30, p. 14.

9. Sic Opn, p. 89

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60

but could not affect the incoming messages. About 75 per cent were enciphered with the M-209, the remainder with the M-134-C.¹⁰

The message center opened ashore on 11 July was supplemented shortly with two TC-4's and a Toll Test board ("Zero"), and thirty locals. Field wire was laid down also for initial contact with II Corps CP, Spiral-four cable to the 3d Division at Licata, and rehabilitated German cable to the nearby airport. The Main (Administrative) CP was opened the next day with telephone and teletype communication to neighboring units, and copper wire circuits following the axes of II Corps and 3d Division were soon being overhauled. The Forward (Tactical) CP was by this time separate.¹¹

The Advance CP originally planned for the Commanding General's destroyer was not established.¹²

The 51st Signal Battalion. While the bulk of the Battalion served rear installations in North Africa, it is reported that one SCR-299 team participated in a counter-battery net, and that two intercept stations were manned in the invasion.¹³

The 53rd Signal Battalion. Hq II Corps remained aboard the headquarters ship Ancon until the morning of 11 July. Although the vessel

10. 1st Armd Sig Bn--TAG, 27 Aug 43; 1st Armd Sig Bn, ...Log...; Maj. Crook--DepCSigO, Signal Communications in Sicily, 24 July 43, par. 3; SCTIL No. 30, p. 14; Radio Planning O--Sig O, Seventh Army, 31 Aug 43.

11. 1st Armd Sig Bn--TAG, 27 Aug 43; 1st Armd Sig Bn, ...Log...

12. SCTIL No. 30, p. 14.

13. Hist, 51st Sig Bn, 1943, p. 3.

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61

was specifically designed for such work it also carried Hq 45th Division, and the facilities seem to have been unequal to the demands on them -- many priority messages being received six to eight hours after origination.¹⁴

Meanwhile, shortly before noon on the 10th, the personnel on the LST's were debarked between Scoglitti and Gela, and two SCR-299's in DUKW's unloaded several miles southeast of Scoglitti. The latter, having landed at the wrong beach, had to cruise six miles to the right one; together with SCR-193's in jeeps, they then served II Corps and Army nets. The remainder of the D-day echelon was not ashore until about noon of the 12th.¹⁵

It was impossible at first to link Corps Hq with 1st Division by messenger because the enemy held the roads, but messenger service was established to other subordinate units. Wire construction too was somewhat delayed: it was not until 11 July that three teams could be assembled with equipment; there were three more on the 12th. The open wire repair materials landed with the assault vehicles proved invaluable.¹⁶

DIME Units. Detachments of the 286th Signal Company (Composite) were attached to Hq Co, 1st Engineer Special Brigade, Hq 531st Engineer Shore Regiment, and the 2d and 3d Battalions of the latter -- supporting

14. Opn of II Corps...10 July--17 Aug, pp. 6-7, 21.

15. Off. of the Dir. of Intelligence, ASF, Statistical Data Based on Operations of II Corps in Sicily 10 July--17 Aug 43; 53d Sig Bn, Rpt on Opn "HUSKY", Pt I.

16. 53d Sig Bn, Rpt on Opn "HUSKY", Pt I.

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62

the 1st Division. The detachment with the 2d Battalion of the 531st landed 20 minutes after H-hour east of Gela, the others shortly afterwards; communications were established promptly.¹⁷

With each of the three CT Hqs (16th, 26th, Ranger), on detached service from the 1st Signal Company, was a nine-man wire team with a 2½-ton truck, a jeep, and 30 miles of W-110; and a five-man radio team with an SCR-193 mounted in a 3/4-ton C&R car. Each group of the assault echelon of the Signal Company proper hand-carried ashore a BD-72, 14 EE-8's, 15 miles of W-110 on DR-4, and Reel Unit RL-31. Also, the main group had four SCR-284's, the alternate group two. One construction team from Company "C" of the 53d Signal Battalion¹⁸ landed with the Signal Company.

It was therefore possible for a Division CP reconnaissance party to land with an SCR-284 and establish contact about 0430 with the CT Hqs and the 531st Engineer shore party, and for the advance Division CP crews to land two hours later and set up two BD-72's at a point four miles east of Gela and 300 yards inland. Wire communication was established to the 16th RCT at 1100, to the 26th at 2000; and the laying of lines was begun toward Gela as soon as its capture by the Ranger CT became known.

Both the landing of supplies and the maintenance of wire

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17. Organizational History, 286th Sig Co (Composite), for Calendar Year 1943.
 18. 1st Sig Co--TAG, 8 Aug 43, p. 3, Exhibits A, B, C; 53d Sig Bn, Rpt on Opn "HUSKY", Pt 1.

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63

lines were hampered all day by enemy activity and other local conditions. A direct bomb hit on an LST unloading at the beach destroyed not only the ship but two 2½-ton company trucks: a wire-laying truck complete with Reel RI-26 and 30 miles of W-110, and a supply truck full of miscellaneous supplies. A 2½-ton radio repair truck containing all the company's radio repair equipment was also a total loss, owing to improper landing in seven feet of seawater. On the beach, meanwhile, wire circuits were frequently disturbed by hostile aircraft, tracked vehicles, and the presence of numerous cross-country roads. Fortunately, enough wire-laying and radio equipment was unloaded in time to surmount these obstacles, and communications within the Division were "successfully established to a very satisfactory degree" on the first day of the operation. All Signal Company vehicles and equipment assigned to the assault echelon, except for one wire-laying truck loaned to the Ranger CT, were ashore by 2100 the next day.

On 11 July enemy planes continued to harass the troops, and the vehicular movements incident to the repulse of an enemy tank attack increased the burden of wire maintenance. By the time the airfield at Ponto Olivia was captured, the day after, the wire net was greatly extended and the shortage of wire and batteries critical.

Ship-to-shore radio communication was on the whole unsatisfactory, even though the ranges were normal for the sets employed and alternate FM voice channels were available. Only one channel worked: between an SCR-284 ashore and a Navy set at sea.

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64

CENT Units. Some equipment of the 45th Signal Company was lost because landing craft were "hung up" on sand bars off shore with five feet of water between the bars and the shore; and the confusion in landing delayed the establishment of links with several infantry units. The Division Signal Officer, however, landed with an SCR-193 in the third wave of the battalion assaulting the center beach, and promptly set up a circuit with CENT Hq. By 12 July a signal dump was functioning near Vittoria.²⁰

The accompanying 40th Engineer Regiment was served by the 74th Signal Company (Special),²¹ but no details are at hand.

JOSS Units. The 71st Signal Company (Special) landed at Licata according to plan and established "an excellent beach communication system" on three beaches. Nine-man teams served each of the three battalions of the 36th Engineer Regiment; 19 men and 1 officer, regimental headquarters. By D plus 2 the regimental CP was established in the town of Licata, the port was opened, and port communications were provided by part of the 1st Battalion's communication team. Meanwhile, facilities on the beach north of Licata closed down and the team moved forward with the Engineer Regiment. The other teams remained on their beaches.²²

The 3d Division Commander's net and FM Command net were both opened by the 3d Signal Company shortly after H-hour. In the former,

20. Sig O, 45th Div—OG, Seventh Army, Report of Lessons Learned in Operation "HUSKY", 23 Aug 43, Incl. 1; Historical Record, 45th Sig Co, 28 Dec 43.

21. 1st Engineer Special Brigade—CG, Seventh Army, Report of Lessons Learned in Operation "HUSKY", 24 Aug 43, Pt I, p. 1.

22. 71st Signal Company (Special), Organizational History, 1943.

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65

an SCR-188 aboard the U.S.S. Biscayne, Sub-Force headquarters ship, was linked with 11 SCR-193's in jeeps, designed to serve the Division Commander and his staff officers with voice communication. Although all were landed in ICVP's without mishap, interference compelled constant resort to CW transmission. The FM Command net consisted of an SCR-608 on the headquarters ship and 610's at the CP of each infantry regiment, each assault battalion, and the Division Artillery. The 608 could call on the command frequency of each of these parties, and the Division frequency was the alternate frequency on each of their 610's; communication was quite satisfactory. So also were the Division links to Force 343 (SCR-188) and 12th Air Support Command, which opened at H plus 1 and H plus 4, respectively.

23

Provision had been made, further, for a Division HF net composed of Navy sets on the headquarters ship and SCR-193's mounted in 3/4-ton carryalls. But since the latter had a low landing priority, the regimental commanders left their CP ships at H minus 45, and their own nets functioned well, the HF net was little used. The circuit intended to work with the 82d A/B Division was not used at all; nor was the command net in the 36th Engineer Regiment, inasmuch as Division channels were sufficient for the contacts required. The "J" (friendly) and "Y" (enemy) intercept links to Force 343, manned off-shore by a detachment from the Radio Intelligence Platoon, never worked, and the

23. 3d Div--Seventh Army, Report of Signal Communications, Operation "HUSKY", 26 Aug 43, pp. 1-3; SCTIL No. 31, pp. 47-49.

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Regimental CP, 3d Division, on the beach, D-day

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66

Division channel to Division Rear worked only when an SCR-188 was diverted to it. Both these circuits had depended on Navy TCS5 sets, which were unsatisfactory in themselves and interfered considerably with other nets.²⁴

The message center for the landing operation opened on the Biscayne on 6 July and operated continuously until the 16th. The Advance CP opened ashore behind "Beach Yellow" at 1232, D-day, establishing as quickly as possible wire lines to the infantry regiments, radio stations in the nets in operation afloat, and a message center. The message center was seldom used for tactical messages from Division to lower units, however, since staff officers generally communicated with subordinate commanders by direct voice radio. The main CP was set up at 1535, D-day, on the north side of Licata, with radio, wire, and messenger service to divisional and attached units. "J" and "Y" service ashore was begun at 1000 the next day with the aid of a detachment of the 128th Signal Radio Intelligence Company, and by 1600 the remainder of the assault echelon of the Signal Company was at the CP.²⁵

Except for continued contact with the Naval command on the headquarters ship and with the Engineer shore parties, the establishment of the Division CP ashore concluded the amphibious phase of communications. The regimental commanders' sets dropped out of the

24. 3d Div--Seventh Army, 26 Aug 43; 3d Sig Co--CG, 3d Div, Action of 3d Sig Co in Operation "HUSKY", 30 July 43.

25. 3d Div--Seventh Army, 26 Aug 43; 3d Sig Co--CG, 3d Div, 30 July 43; SCTIL No. 31, pp. 47-49.

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67

Division Commander's net, and all ~~nets~~ eliminated the rear links to ships. The Division Commander's net operated as an intelligence net -- principally on CW, the high mobility of the jeep-mounted SCR-193's proving a great success. The FM Command net likewise continued to operate. SCR-536's were utilized within companies, 511's within battalions.

26

Four-man wire teams from the 3d Signal Company were attached to and landed with the infantry regiments, each team bringing the wire ashore and laying it from a jeep; more wire was landed in two-wheel $\frac{1}{2}$ -ton trailers. Each of the six teams had six miles of wire W-110-B and circuits were established to all three regiments immediately after physical contact. Since the teams had been advised beforehand of the probable location of the Division and regimental CP's ashore, the lines were in one hour after the Advance CP opened. In order to put off the anticipated crisis in field wire supply, emphasis was laid on utilizing existing open wire, the repair of these circuits being undertaken on a large scale with the aid of a detachment of 18 men and 1 officer from Company "A" of the 51st Signal Battalion -- attached

27

On 11 July the Division signal supply dump was established at Licata; the next day saw the accumulation of ten days' signal supply and maintenance -- one day behind schedule. The 12th witnessed also the appearance of radio and telephone facilities and a message center

26. 3d Div--Seventh Army, 26 Aug. 43.

27. 3d Div--Seventh Army, 26 Aug 43; 51st Sig Bn--CG, Seventh Army, Operation "HUSKY", 15 Aug 43.

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68

for a new CP at Santa Oliva Station, the wire system of the old CP
at Licata being turned over to the Signal Section of the Force Depot. 28

The message traffic of the 3d Division is reported as follows
29
for the amphibious phase 10-14 July:

System	10	11	12	13	14
ECM	705/9	295/4	5040/46	3858/46	4690/32
M-209	1858/31	830/18	553/14	1837/26	376/6
JT OP	205/14	14/2	91/2	--	--
CODEX	379/26	162/4	108/4	451/7	--
Clear	-- 11	-- 5	-- 3	-- 7	-- 8
Total	3247/91	1501/33	5791/69	6146/86	5057/46

KOOL Units. Sub-Task Force KOOL, the floating reserve, was served by personnel of the 142d Armored Signal Company, the 286th Signal Company (Composite), and the 1st Armored Signal Battalion. While the bulk of the assault echelon sailed on an LST, four officers and 19 men acted as a communications staff for Force Hq aboard the U.S.S. Orizaba. They operated a small message center throughout the trip and swung into full stride at 100001B July, shortly after H-hour, opening radio stations in the Force 343 Command net, the Force 343 "J" reporting net, and KOOL Command net. An auxiliary KOOL net was added at 0800B, linking via SCR-509's Hq Force KOOL, Hq Combat Command "B", Hq 18th RCT, the Beachmaster, and Hq 142d Armored Signal Company aboard LST 369. Five sets were reserved for the use of staff parties going ashore, permitting continuous communication within the Force Hq as each increment landed --

28. SCTIL No. 31, pp. 47-49; 3d Sig Co--CC, 3d Div, 30 July 43.

29. 3d Div--Seventh Army, Pt II, App. No. 3, 26 Aug 43.

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69

30

a process completed at 2300.

Early the next morning the initial Force CP was established about a half-mile inland and three miles east of Gela, an SCR-509 being left on the headquarters ship. Through that set and associated Navy channels, the CP was able to direct landing operations. The other Signal personnel from the Orizaba having arrived, meanwhile, "after an all night march from the wrong beach", the CP was moved to a better spot and a message center set up. But the FM voice net remained the only means of communication until wire lines were run, that afternoon, to the 1st Division, 18th RCT, and 540th Engineer Shore Regiment. The FM net was supplemented rearward on the 12th, when two jeep-mounted SCR-193's landed and entered the Force 343 Command and "J" service nets.

Major expansion of facilities began with the arrival of the bulk of the 142d Armored Signal Company from LST 369 with the remainder of the company's equipment. A BD-72 was set up, locals laid within the CP, a trunk run to Hq Combat Command "B", and the improvised circuits to 1st Division and the 18th RCT replaced by regular lines. Wire communications were upset considerably, however, because vehicles skidded and stuck in the sandy roads and there were no trees to facilitate hanging wire overhead. The line to Combat Command "B" was particularly unreliable, and a second one, following a different route,

30. Div Sig O, 2d Armd Div-CG, Seventh Army, Report of Operation "HUSKY", 24 Aug 43; 1st Engr Spec Brgd-CG, Seventh Army, 29 Aug 43, Pt I, p. 1.

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31
was laid on 13 July.

Force Radio Operations. Shipboard radio operations were successful partly because the high calibre of the personnel outweighed the disadvantages of serious crowding. Furthermore, Naval equivalents for the usual Army sets were employed as far as possible in order to take advantage of their high resistance to the salty atmosphere. Extra facilities to ensure channels for staff officers moving between ships and shore were provided by special "Signal Detachments, Provisional Type II", composed of highly skilled radio operators and cryptographers serving with the Navy on detached service -- part of the ship's
32
company.

The three intercept teams of the 128th Signal Radio Intelligence Company stationed near Bizerte found it impossible to operate over the distances involved in the invasion. Despite the establishment of contact between the forward teams accompanying the assault forces and the control station, therefore, the plan was rendered in-
33
effective.

Supply. Sub-task force signal dumps were opened on D-day at Vittoria, Gela, and Licata, by Storage & Issue sections of the 206th Signal Depot Company. These sections, attached respectively to Forces CENT,

31. Div Sig O, 2d Armd Div--CG, Seventh Army, 24 Aug 43.

32. Sic Opn, pp. 14-15; Erickson and Bethard Interviews.

33. 128th Sig RI--CG, Seventh Army, 21 Aug 43; 128th Sig RI Co.--
[TAG], 14 Jan 44.

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DIME, and JOSS, were assisted by Force personnel.

C. 12-21 July.

Between the 12th and the 15th of July Seventh Army troops secured the airfields in the area behind the beachhead and forced the enemy to retire beyond artillery range of those fields. The 1st and 45th Divisions (II Corps) then pushed in a generally northerly direction, while the 3d, 2d Armored, and 82d A/B (which became on 18 July "Provisional Corps") drove in a generally northwesterly direction. Palermo, the objective, fell on the 21st. The army CP was at Gela during this period.

Army Hq. The Main CP was established at Gela, for the administrative sections and the Signal staff. Since the latter were accordingly "somewhat out of touch" with events at the front, there were frequent delays in the appearance of "effective action".

"Radio Control" was located at the Main CP on 13 July but moved the next day to the Forward CP (Tactical). With the arrival of more equipment the 1st Armored Signal Battalion put 11 nets into operation, including three handled by British liaison teams; a detachment of two SCR-299 and two SCR-193 crews accompanied Hq Eighth Army. Messages were still characterized by excessive length and overclassification, and there were fewer radio sets than were really needed, but "little

34. Sig Sply O—Sig O, Seventh Army, History of Signal Supply in Sicily, 20 Aug 43.

35. SCIL No. 30, pp. 6-10.

36. Sic Opn, p. 89.

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72

difficulty" was met in operations. The Forward CP processed some 20,000 code groups a day -- 70 per cent on the M-134-C; the Main CP handled 600 messages a day. The average number of groups in coded messages was 103. Each message center had three shifts, and scheduled and special motor messengers were operating to II Corps, 3d Division, 2d Armored Division, and 82d A/B Division by 14 July. An SCR-299 link to 15th Army Group Hq in Syracuse was replaced in mid-July by an FM VHF Radio Relay system.

The Forward CP was provided with two TC-4's and 14 locals on 13 July, and as the roads to Licata (West) and Ragusa (East) were cleared of the enemy, work began on rehabilitation and expansion of fixed wire. It was necessary not only to bridge the gaps created by enemy demolition, but to improve the Italian installations with transposition, new brackets, re-sagging, and the like. Sabotage played an important part: more than one hundred interruptions in service were traced to that source, between Gela and Licata, within seven days. The principal solution was the arrest of every person known to have information on the construction, operation, or maintenance of the lines.

At first Company "C" of the 1st Armored Signal Battalion worked along the railway to Licata while Company "D" reconstructed

37. 1st Armd Sig Bn--TAG, 27 Aug 43; 1st Armd Sig Bn,...Log...; Sic Opn, p. 89; Interview, Capt. Perkins and Mr. Joe Durrer, n.d.

38. 1st Armd Sig Bn--TAG, 27 Aug 43; 1st Armd Sig Bn,...Log...; Sic Opn, p. 89.

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73

the wire north to Caltanissetta, following II Corps. But the Army axis shifted to the former on 16 July and most of the construction troops were transferred accordingly; by this time, part of "C" Company was beyond Casteltermini on its way to Palermo. At the end of the "Gela" phase the bulk of "C" Company was rehabilitating open wire and laying Spiral-four cable in the Licata-Agrigento area and "D" Company was adding more circuits between Gela and Licata; other crews were still following II Corps and 3d Division. Switches were installed early at Licata, Naro, Canicatti, Campobello, Palma, and "Cadet", each consisting of one or more BD-72's and three operators. By 18 July Company "B" was maintaining switches at Naro, Canicatti, and Palma; and other installations at Gela and Licata.

The Forward CP was at Agrigento on 18 July, and the 21st saw the arrival there of Hq, "A" and "C" Companies of the 1st Armored Signal Battalion. There were now four circuits from Gela to Ragusa (Eighth Army) -- open wire; two open wire lines from Gela north to Barrafranca and Spiral-four circuits in the same direction to II Corps, 45th Division, and 1st Division; two channels of each type from Gela west to Licata; and three open wire lines from Licata north and north-west to Canicatti and Agrigento.

The 229th Signal Operations Company, some of whose radio

39. 1st Armd Sig Bn--TAC, 27 Aug 43; 1st Armd Sig Bn,...Log...

40. SCTIL No. 30, pp. 15-16; 1st Armd Sig Bn,...Log...

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teams and motor messengers were already at work on detached service with other units, landed at Licata on 18 July to relieve the 1st Armored Signal Battalion at five Army Rear installations. The 286th Signal Company (Composite) continued to perform similar functions in the Licata area, some detachments moving to Agrigento. Hq Company of the 51st Signal Battalion, operated an Army Rear message center in ⁴¹ Bizerte.

II Corps Units. The initial efforts of the 53d Signal Battalion were held up because it did not receive all its vehicles and equipment until 18 July. During the period 12-17 July, however, it managed to install and maintain 27 miles of W-110-B and 77 miles of Spiral-four ⁴² cable, and rehabilitate 54 circuit miles of open wire.

The 1st Division CP moved on 13 July to a point five miles east of Gela on the Gela-Vittoria road, but the rapid advance of the 16th and 26th RCT's placed their headquarters too far away for reliable wire communication and the Division CP went forward again on the 14th to a point seven miles north of Gela. The wire and battery crisis was eased, meanwhile, by the arrival of the first follow-up convoy (D plus 4). Between the 16th and the 21st of July, the Division CP location changed several times as the enemy fought a

41. Lt. E. N. Chamberlain, Pool Rpt. 15 Jan 44; Organizational Hist, 286th Sig Co (Composite)...1943; Hist of the 51st Sig Bn, 1943, p. 3.

42. 53d Sig Bn, Rpt on Opn "HUSKY", Pt. I.

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75

delaying action but retreated; on the 20th it was established near
Villa Rosa.⁴³

The 45th Signal Company moved five times during this period.⁴⁴

Provisional Corps Units. During the drive from Licata to Palermo, 17-25 July, the 3d, 2d Armored, and 82d A/B Divisions were coordinated by Provisional Corps. A small Hq Signal Section furnished radio and messenger communications; no wire equipment was carried. Radio nets were maintained with ten SCR-193's — two in M-3 half-tracks, two in scout cars, and six in jeeps; on 21 July an SCR-299 in an M-3 and a power-unit trailer was added. (The 299, and seven of the 193 teams, were on loan from the 1st Armored Signal Battalion.) Although most of the sets had only one operator, and only two had three operators, 24-hour service was maintained. But since the division headquarters were generally separated from the Corps CP by 5--30 miles of mountain ranges, communication was uncertain, particularly when either sender or receiver was in motion — and all headquarters were the greater part of the time.^{44a}

When the 3d Division CP moved from Santa Oliva Station to Muro on 16 July, the Signal Company reorganized the old installation as a switching center, which operated until the 18th. Another switching center, set up at the Campobello railroad station to tie in trunk

43. 1st Sig Co—TAG, 8 Aug 43, pp. 4-6.

44. Historical Record, 45th Sig Co, 28 Dec 43.

44a. Provisional Corps—CG, Seventh Army, 25 Aug 43; 1st Arm'd Sig Bn—TAG, 27 Aug 43.

DECLASSIFIED

DECLASSIFIED

76

facilities, locals, and the railhead, was turned over to Seventh Army the same day. Similarly, the switchboards placed in service at Aragona and San Stefano, on the 19th and 21st, respectively, operated as switching centers after the CP moved on; both closed down⁴⁵ 22 July.

The 3d moved ahead so fast that the Signal Company wire teams were able to maintain links only with the infantry regiments and a Combat Command of the 2d Armored Division. These links had been as much as 35 miles long when the chase began; the movement to Aragona involved equally long lines to the base, and 10--20 mile circuits to regiments and attached battalions. Such communication could be provided only by utilizing systematically the existing open wire and patching breaks with field wire rather than attempting reconstruction. Division Signal Company personnel were again aided in this work by the detachment from Company "A" of the 51st Signal Battalion. The advance from Aragona was so rapid that the CP shifted twice in 12 hours and there was no wire communication at all; only⁴⁶ radio.

Much trouble was caused by sabotage and the nature of the terrain. The 2½-ton 6x6 wiretrucks, unable to negotiate the narrow mountain roads, were assigned to the transport of wire from rear dump to Advance CP rather than wire-laying. The latter was done

45. 3d Sig Co--CG, 3d Div, 30 July 43.

46. SCTIL NO. 31, pp. 50-51; 2nd Div--Seventh Army, 26 Aug 43, p. 3.

DECLASSIFIED

DECLASSIFIED

77

partly from jeeps mounting Reel RI-31 and partly by hand.

The 3d Division signal supply dump remained at Licata until 16 July, and was seldom as far forward as the Advance CP owing to the speed of operational movements and the shortage of transportation. ⁴⁷

By 14 July Force KOOL was moving north and the CP established one mile west of Gela. The Force 343 Command and "J" reporting nets and the KOOL Command and Reconnaissance nets functioned well, the "J" service being found less valuable as a reporting net than as a channel parallel to the Force 343 Command net capable of relieving it when necessary. The 142d Armored Signal Company also laid the usual wire lines. Soon afterwards, the Force advanced to Campobello, the 18th RCT was detached from it, and Combat Command "A" joined it -- re-creating as one unit the 2d Armored Division. The existing radio nets were now supplemented by a Division Administrative net.

Bringing up signal supplies was a serious problem, partly because dumps at the beaches "would mysteriously disappear overnight and appear elsewhere with a new group of personnel in charge", and partly for lack of transport. However, the Signal Supply Officer of the 2d Armored Division managed to borrow enough trucks to shuttle his wares forward.

As the 2d Armored, now part of Provisional Corps, rolled ahead from Campobello to Palermo in four days, the CP was displaced five times. Several factors hampered its operations at one time or

47. SCTIL No. 31, pp. 50-51.

DECLASSIFIED

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78

another: bad atmospheric conditions, mountainous terrain, destruction of the bridges strong enough to support radio vehicles, separation on the move of the CP parties from the signal personnel detailed to serve them, and the refusal of Provisional Corps Hq to accept radio traffic while in motion. Each halt was marked by vigorous activity to clear the messages thus accumulated. Wire communication, despite all efforts to utilize existing open wire, could not be maintained with
48
any continuity.

Supply. When the sub-task forces were dissolved 16-18 July and all units reverted to Seventh Army control, all three signal dumps likewise became Army Supply Points. The responsibility for unloading, storing, and issuing the supplies was then assigned to the 1st Engineer Special Brigade, under the eye of G-4, Seventh Army. Since control of critical equipment, and the maintenance of a steady flow of signal supplies in general was accordingly out of the hands of the Army Signal Supply Officer, there was much delay and discouragement. These difficulties were aggravated by the Navy's returning to North Africa 80 per cent of the assault phase signal supplies for Force DIME; fortunately, it was possible to draw on the 21-day maintenance stocks in the hands of Forces KOOL and CENT.

By 20 July II Corps was so far beyond Caltanissetta that the Army Supply Point had to be transferred there from Gela. Meanwhile, the ASP at Vittoria was abandoned and its stocks moved to Gela; no

48. Div Sig O, 2d Armd Div—CG, Seventh Army, 24 Aug 43.

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79

more supplies were unloaded at Vittoria. The Gela and Licata depots now supported the new signal ASP.

"As soon as possible" after the reversion to Seventh Army Control, the three repair sections of the 177th Signal Repair Company attached during the assault to "other" units (Division Signal Companies?) were reattached to the three Storage & Issue sections of the ⁴⁹206th Signal Depot Company.

Supply operations in the rear were aided considerably by the 71st Signal Company (Special), attached to the 36th Engineer Regiment. Repairing a wire line that ran 30 miles inland from Licata along the railway, it enabled the railway operating battalion to handle ⁵⁰more than one supply train at one time.

49. Sig Sply O--SigO, Seventh Army, 20 Aug 43.

50. 71st Sig Co (Sp), Organizational Hist, 1943, p. 3.

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CHAPTER IV

OPERATIONS 21 July--17 August 1943

A. 21-25 July

During this phase of the campaign, Palermo was occupied (22 July) by the 2d Armored and the 3d Divisions and preparations were made for establishing Headquarters Seventh Army there. The 1st and 45th Divisions, meanwhile, continued to advance north across the center of the island.¹

Army Hq. The drive on Palermo progressed so rapidly that the main (administrative) CP was moved to Agrigento on 21 July and set up with two TC-2's and 35 locals. Six trunks routed through the "Zero" board connected it with the TC-4 and 14 locals at the Forward (tactical) CP. Company "D" of the 1st Armored Signal Battalion rehabilitated open wire on the II Corps axis and, according to one source, managed by dint of extraordinary efforts to maintain constant contact. Another, on the contrary, characterizes that contact as "most unsatisfactory and spasmodic". "C" Company worked on the 3d Division axis, patching through with field wire or Spiral-four cable and replacing the patches with copper later; they did lose contact, though, on the last day of the 3d Division's movement, the advance outpacing wire by some 30 hours. In neither case did time permit rehabilitation of the desired thoroughness.

Most of the open wire lines were suitable only for telegraph, since they lacked transposition and teletype communication was frustrated

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81

by poor grounds and strong leakage to ground. Transposition of these circuits for carrier and telephone was complicated, in turn, by the presence of both copper and iron strands and different gauges of both -- causing imbalance. The poles being in much better shape, it was generally found best to string new wire on them.

By 24 July two open wire circuits had been extended to Villafraati -- 22 miles southeast of Palermo, to Vallerlunga Pratemeno, to Alimena -- 21 miles east of it, and to Caltanissetta. Meanwhile, Company "C" moved as a body from Agrigento to Palermo, to be supplemented soon by most of "D" Company (some teams remained with II Corps) and detachments of the other companies of the 1st Armored Signal Battalion. Circuits were completed between Agrigento and Palermo and the first steps were taken towards preparing the new Army CP in the latter city. Pending rehabilitation of its open wire and cable, a 10-pair rubber cable was laid from the main switchboard outside Palermo to the city limits, ready to be connected to the communication system within.

Switching centrals were in operation at this time at Gela, Licata, Naro, Canicatti, Campobello, and Palma; each had one or more
2
BD-72's and three operators.

Saboteurs frequently interrupted communication by cutting or hammering wires or splicing them incorrectly, and by attacking repair crews. The Spiral-four cable Agrigento--Palma was burned into three times and hacked with an axe five times in one 24-hour period. On one

2. SCFIL No. 30, pp. 16-18; 1st Armd Sig Bn--TAG, 27 Aug 43; 1st Armd Sig Bn,...Log...; Sic Opn, p. 90; Comments, Col. Williams, 7 July 1945.

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occasion seven saboteurs were shot. Indeed, so much damage was done by sabotage, vehicles, and grass fires, that a great deal of the Spiral-³ four cable laid in Southern Sicily had to be replaced by open wire.

Central office facilities too were in poor condition. Direct bomb hits had destroyed the equipment at Caltanissetta; and while the automatic equipment at Palermo and Agrigento was in working shape, it required much cleaning and routine maintenance before good service could be restored. That was the job of the 229th Signal Operations Company. One third of the company had been expected to be necessary by 18 July; events dictated the arrival on that date of the entire organization. Relieving the 1st Armored Signal Battalion at rear installations, it repaired and placed in service the manual Italian switchboards at Gela and Licata and the automatic exchange at Agrigento, and took over operations also at Naro, Canicatti, Caltanissetta, and Base Area Hq. Communications at 1st Engineer Special Brigade Hq. passed into the hands of the 229th at some time shortly afterwards, service for the Engineer Regiments continuing to be furnished temporarily by the 71st Signal Company (Special) and the 286th Signal Company (Composite).⁴

Company "A" of the 1st Armored Signal Battalion operated the Army radio nets already established, one new link to Gela being added — served at the Gela end by the 229th Signal Operations Company. The

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3. SCITL No. 30, 16-17; 229th Sig Opns Co—CG, Seventh Army, "HUSKY" Operation, Pt I, 25 Aug 43.
 4. Wire C—Sig O, Seventh Army, Lessons Learned in Operation "HUSKY", 22 Aug 43; 229th Sig Opns Co—CG, Seventh Army, 25 Aug 43; Chamberlain Pool Rpt, 15 Jan 44; 71st Sig Co (Sp), Org Hist 1943, p. 3; Organizational Hist, 286th Sig Co (Composite)...1943.

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transmitters at the Forward CP were dispersed and run by remote control. The CP was located in a room excavated in a hillside about one mile from the transmitters and connected to them by two 10-pair cables. Communication was hampered by poor ground conductivity and unusual distances, which called for more high-power sets than could be obtained.⁵

Three-shift message centers continued to operate at both the Forward and Main CP's. Scheduled and special motor messenger and special air messenger service was maintained to II Corps, Provisional Corps, 3d Division, and 2d Armored Division. Traffic reached 15,000 code groups a day during the first half of the period, declining to an average of 9,000 in the second half. Eighty-five percent of the code work utilized the M-134-C.⁶

II Corps Units. The 1st and 45th Divisions gained ground so quickly that the Corps CP moved five times 18-24 July. For that reason, and because the remainder of Company "C" of the 53d Signal Battalion arrived on the 18th three days later than planned, it was impossible to work forward in anticipation of the axis. In fact, it was hard enough to catch up with current requirements; twice, the construction crews had to pick up cable already laid elsewhere and salvage German cable. During these days "C" Company installed and maintained 14 miles of M-110-B and 140 miles of Spiral-four, recovered and serviced 59 miles of Spiral-four, and rehabilitated 138 miles of open wire.⁷

5. 1st Armd Sig Bn--TAG, 27 Aug 43; Radio Planning C--Sig C, Seventh Army, 31 Aug 43.
6. 1st Armd Sig Bn--TAG, 27 Aug 43; 1st Armd Sig Bn,...Log....
7. 53d Sig Bn, Rpt on "HUSKY", Pt. I.

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No further information is at hand.

Provisional Corps Units. When the 3d Division reached Misilmeri (24 July) an open wire circuit was established with Division Rear at Prizzi, 40 miles south. According to the Division's report, Company "A" of the 51st Signal Battalion had been counted on for this work but "arrived late and was removed from Division control before it could be used." The Company's report states simply that it landed at Licata on 22 July and pushed north, rehabilitating open wire in the wake of the advancing combat troops.⁸

As operations proceeded into the mountains, the Division link with the Engineer Shore Regiment became unnecessary and the FM Command net unworkable. The other circuits, though restricted to tactical messages (except the Division Advance—Division Rear link), were nonetheless overloaded at all times — a serious matter in view of the uncertainty of wire communication.⁹

The 2d Armored Division, having taken Palermo on 22 July, turned it over to the 3d Division on the 24th and assembled west of the city for reorganization.¹⁰ The sources are silent on communications.

Supply. During this phase, the Army Signal Supply Point continued to operate at Caltanissetta.¹¹

8. 3d Div—Seventh Army, 26 Aug 43, p. 3; 51st Sig Bn, Operation "HUSKY", Pt I, 25 Aug 43, p. 1.

9. SGTIL No. 31, p. 51.

10. 2d Armd Div Sig O—CG, Seventh Army, 24 Aug 43.

11. Sig Sply O—Sig O, Seventh Army, 20 Aug 43.

DECLASSIFIED

85

11. 25 July--6 August

Based on Palermo, Seventh Army struck east towards Messina. On 31 July the 45th Division took San Stefano and was relieved by the 3d. The bulk of the 9th Division debarked at Palermo on 1 August and took the place of the 1st Division after its conquest of Troina five days later. The same date marked the half-way point of the 3d Division's struggle for San Fratello.

Army Hq. The establishment of the new Army CP in Palermo and the arrival of II Corps at Petralia shifted the axis from Gela--Palermo to Palermo--Messina. Since the new axis area was by no means clear of enemy troops, communication to Corps had to continue via Agrigento until the construction teams of the 1st Armored Signal Battalion pushing along the (northern) coast could throw out a series of lateral lines to Corps Hq. as both groups advanced in parallel. With the aid of switching centers first at Termini and then at Cefalu, it became possible to utilize the successive lateral lines for alternate routes of communication; as a rule these laterals were open wire carrying telephone and teletype circuits. Crews from the 53d Signal Battalion working right behind the combat troops extended two channels to San Stefano.

Destruction of existing lines had been pretty thorough; what remained lacked transposition, and the neighborhood was plentifully sown with mines. Rehabilitation was accordingly a large order, the expeditious filling of which owed a good deal to the work already done by II Corps and to the forethought of those who arranged for the careful training of

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86

construction troops in mine removal. It was possible to maintain wire contact with the 3d Division, however, only where gaps could be bridged with field wire. All circuits were disturbed by sabotage and by the rifle practice of irresponsible "friendly" elements.¹³

Both Army CP's were at this time in the city of Palermo, linked by four telephone trunks. The Forward CP had a TC-4 and 21 locals; the Main CP, the "Zero" board, two TC-2's, and the 5000-line dial system of the city exchange (Società Esercizi Telefonici--SET). The latter had been damaged somewhat by military operations and required some cleaning and adjusting anyway, but a 1st Armored Signal Battalion crew assisted by well-disposed Italian civilians soon had 109 dial lines in operation. The TC-2's were employed to furnish service the dial system could not provide -- 26 common battery trunks and 18 locals. Local civilian telephone service from the SET exchange was discontinued except for lines approved by AMGOT; long distance (intra-island) facilities had been destroyed by a direct bomb hit.¹⁴

The Army radio transmitters were located two miles from the Forward CP and remotely controlled from that point -- until the daytime noise level drove "radio control" to the transmitter area; after that it was connected to the message center by teletype and messenger. There

13. 1st Arm Sig Bn--TAG, 27 Aug 43; 1st Arm Sig Bn,...Log...; Sic Opn, p. 95; SCTIL No. 30, p. 18; 3d Div--Seventh Army, 26 Aug 43, p. 5; Comments, Col. Williams, 7 July 45.

14. 1st Arm Sig Bn--TAG, 27 Aug 43; Sic Opn, p. 95.

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were 13 links, involving 25,000 code groups a day. Difficulty was encountered in maintaining 24-hour a day communication between the Main CP and II Corps, until a relay station (SCR-193) was set up on 2 August at Cefalu. Radio operations in general were hampered by distance, excessive length and overclassification of messages, and staff ignorance of the time required to transmit by radio.

15

The Army message center continued to operate in two echelons with three shifts each. Code traffic at the Forward CP declined to 7,000 groups a day and increased at the Main CP to 3,000 a day. Scheduled and special messenger service was furnished from Army to II Corps, Provisional Corps, 3d Division, 2d Armored Division, 82d A/B Division, and Agrigento. The special air messenger service to II Corps, 82d A/B Division, and Agrigento was discontinued after three days because the Artillery needed the planes (Piper Cubs).

16

By this time the 1st Armored Signal Battalion had been relieved of its responsibilities at Agrigento by the 229th Signal Operations Company. The Army message center in Bizerte was left in the hands of a skeleton crew as the bulk of the 51st Signal Battalion (less Company "A") embarked for Sicily.

17

Several construction teams of the 1st Armored Signal Battalion were out on loan to other organizations -- two to the 2d Armored Division

15. 1st Armd Sig Bn--TAG, 27 Aug 43; Radio Flng O-Sig O, Seventh Army, 31 Aug 43.

16. 1st Armd Sig Bn--TAG, 27 Aug 43.

17. 1st Armd Sig Bn--TAG, 27 Aug 43; Hist of the 51st Sig Bn, 1943, p. 3.

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88

and six to II Corps; radio and cryptographic teams were still assigned to Provisional Corps. But the bulk of the battalion was busy in Palermo, rehabilitating the city's extensive open wire and underground cable plant — considerably upset by the bombing and shelling incident to its conquest. Also, a number of central office and local installations were made for Naval, Harbor, and Antiaircraft units. A guard was posted at the long distance exchange of the Poste Telefoniche e Telegrafiche (PTT).¹⁸

On 28 July the communications section of the 814th Signal Port Service Company began to install and operate telephone communications for the 10th Port of Embarkation (Palermo). The network included a TC-4 at headquarters and a TC-2 at the docks, an Italian switchboard at the signal dump, and sixty miles of wire.¹⁹

II Corps Units. Company "C" of the 53d Signal Battalion installed and maintained wire lines from Corps to the 45th Division (later, to the 3d). "A" Company, which became "available" on 25 July, performed the same function down to the 1st Division.²⁰

There is no information at hand about the 45th Signal Company.

For several days in the last week of July the 3d Division rested and reorganized preliminary to relieving the 45th at San Stefano. During this period the Division organized a provisional pack train, 20

18. 1st Armd Sig Bn, ...Log...; Sic Opn, p. 95.

19. 814th Sig Port Serv Co, Rpt of Lessons Learned in Operation "HUSKY", 24 Aug 43.

20. 53d Sig Bn, Rpt on Opn "HUSKY" Pt 1.

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SC 179425

A wire team of the 45th Division tracing trouble,
28 July '43



SC 179426

Signal Corps linemen stringing wire along the road
to Messina, only a few miles behind the front, 31
July '43

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89

of whose mules were allotted to the Signal Company to transport its wire and radio equipment. The Signal Company accordingly set up two wire teams of four men and four mules each, and two radio teams of two men and two mules each. The wire team mules would carry two DR-4's of W-110-B or two miles of W-130; the radio team mules, SCR-284's.

On 31 July a Division CP was set at Tusa. The wire circuits installed by the 45th Division were expanded and radio communication established to II Corps and within the Division. The next day the 3d relieved the 45th at San Stefano, driving east to Messina. In the ensuing action the CP moved 79 miles, in seven displacements whose distance varied between 2-1/2 and 17 miles. In most instances, as before, switchboards at old CP's continued to serve as switching centers for a few days after the new CP opened.

The front was limited by the mountains to ten miles; communications, to a "single, narrow coastal road interrupted by frequent German mine fields, interdicting artillery concentrations, and demolitions." The Division CP, moreover, consonant with the desire of the Commanding General to be near the front and within a quarter-mile of this road, was generally within three to five miles of the front. Locations open enough for the maneuvering of 2-1/2 ton trucks had to be utilized, and since space limitations frequently dictated choosing spots near artillery batteries, CP activities were exposed to counter-battery fire. The installation had to be moved and reestablished more than once.

While the road was a natural wire axis from which no unit of the division could wander very far, the local open wire had been

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90

demolished beyond immediate repair, traffic conditions rendered most difficult the laying and maintenance of any wire, and regimental CP's were often inaccessible to large vehicles — sometimes even to jeeps. Hence, profiting from earlier experience, the Signal Company used the 2-1/2 ton wire trucks only in the rear, for salvage and supply. Along the main axis at the front, wire was laid from jeeps; off the main axis, the mules spared wire personnel much grueling hand labor but could not eliminate it. Faced with stiff enemy resistance, combat troops undertook several enveloping movements; wire often had to be laid to them over rocky, trackless mountainside -- twenty miles of it, on two occasions.

The radio mule teams operated in these enveloping movements too; but unpacking, repairing, and adjusting the SCR-284's took considerable time, and the metallic deposits in the mountain ridges perpendicular to the coast interfered seriously with radio communication across the ridges. More reliable contact was secured by placing SCR-609's on the ridges and operating on a relay basis.

The Radio Intelligence Platoon furnished "J" service during these operations, working as a rule several miles forward of the Division CP. In fact, its commander was injured by shrapnel.²¹

The message center was utilized only for administrative traffic and traffic for higher headquarters.²²

21. SCITL No. 31, pp. 50-53; 3d Div—Seventh Army, 26 Aug 43, pp. 4-5; 3d Sig Co—CG, 3d Div, 28 Aug 43.

22. SCITL No. 30, p. 19.

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The signal supply situation was greatly improved. With the 2½-ton trucks originally assigned to wire-laying now available for transport, and a supply line much shorter than before, it proved possible to keep the dump abreast of the Advance CP at all times. ²³

The 1st Division was moving at the same time through Sperlinga and Nicosia towards Troina. The Signal Company established a CP at Sperlinga on 30 July and moved it to a point six miles northeast of Nicosia on 1 August. The 3d saw the installation of a switching center at Cerami to conserve field wire and increase the efficiency of telephone service to the combat teams west of Cerami. Front-line radio service during the battle of Troina led to the severe wounding of an operator. ²⁴

Supply. On 27 July the Army Supply Point advanced from Caltanissetta to Petralia. Two days later the Licata dump was abandoned and its supplies divided between the installations there and at Petralia.

On the 29th also, a signal supply depot was opened in Palermo by the 814th Signal Port Service Company (—port communications were handled by the signal personnel of the engineer shore regiments). In addition to American supplies there was "a lot of usable" material from the captured Italian Engineer Depot that had to be separated into "basic signal components". (Signal communication is an Engineer function in the

23. See Note 21.

24. 1st Sig Co--TAG, 8 Aug 43, p. 6; 1st Sig Co--TAG, Action Rpt 1-17 Aug, 4 Sept 43, p. 2.

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SC 180232

Directing artillery fire against Troina from a forward
observation post near Cerami, over a field telephone;
2 August '43

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Italian Army.) By 2 August the entire 206th Signal Depot Company was on hand to assist the 814th, in storage and issue and repair work. The latter organization, among other things, furnished office personnel for the Army Signal Supply Office, which coordinated the records of all the depots under Army control.

The Army Supply Point serving II Corps moved up to Nicosia on 3 August and was soon supplemented by a branch wire dump even further forward, at Orlando. Supplies were carried from both Licata and Palermo by trucks and daily trains.²⁵

C. 6-17 August

The last phase of the campaign saw the 3d Division take San Fratello on 8 August and Messina on the 17th after fierce fighting that included three surprise amphibious operations. The 9th Division, meanwhile, was on the right flank; the 1st reentered the fray on 13 August.²⁶

Army Hq. On 6 August the tactical CP of Seventh Army was moved to San Stefano; administrative headquarters remained in Palermo. Since the Army, 3d Division, and 45th Division CP's formed one axis along the coast; and the II Corps, 1st Division, and 9th Division CP's constituted another parallel to it, some 25 miles to the south; direct lines were

25. Sig Sply O—Sig O, Seventh Army, 20 Aug 43; 814th Sig Port Serv Co, Rpt...Opn "HUSKY", 28 Aug 43.

26. SCFIL No. 30, pp. 10-12.

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constructed to the 3d and 45th. Leaving all the Army installations in Palermo other than radio to the 51st Signal Battalion, the 1st Armored Signal Battalion pursued an intensive program of wire construction and rehabilitation along both axes. The bulk of its personnel was at San Stefano by 11 August.

Operations were conducted much as before, the northern axis being utilized as a basis for laterals to successive II Corps CP's and the latter being linked as soon as practicable. Thus there were always alternate possibilities for routing and neither the sabotage nor the "troubles caused by our own troops" could interrupt the continuity of communication. The 1st Armored Signal Battalion construction crews lightened their labors considerably by installing the motors from captured German motorcycles in bicycle-type railroad hand cars. Where "H" fixtures were still available, Army construction teams worked on one side while Corps personnel of the 53d Signal Battalion utilized the other; then, when the latter moved on, the former replaced their field wire or cable patches with copper and transposition. Long-range field wire and Spiral-four cable were employed widely, too. The mine-sweeping details continued to be invaluable.

Eight circuits were established between Palermo and Cefalu Switch, six from Cefalu Switch to San Stefano; teletype linked Army tactical headquarters with the administrative CP in Palermo, II Corps, and 45th Division. Switching centers were set up at Cefalu, Termini Immerese, Petralia, San Agata, and Leonforte. The CP had two TC-4's and 30 locals, connected by two 10-pair rubber cable to the "Zero"

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board, located a half mile away at the junction of the east, west, and south wire axes.

When the Army CP moved to Cap d'Orlando, near Naso, for five days (15--20 August), there were two TC-4's and 34 locals linked by four Spiral-four cables laid over five miles of difficult mountain roads to the "Zero" board on the main wire axis. Army and Corps were connected, in the absence of open wire, by two Spiral-four lines. Switching centers were maintained at Petralia, San Agata, and Tusa. The network already in service was supplemented by an extra copper circuit direct to 3d Division, and four construction teams were attached to it. Carrier channels to
27
Palermo were available on the 17th.

The 1st Armored Signal Battalion operated the radio sets for both tactical and administrative headquarters of Seventh Army. There were seven sets at San Stefano and eight at Palermo, including a high-speed circuit linking the two; two SCR-299 teams served as liaison at Eighth Army Hq, and a third was loaned to the 3d Division for the amphibious operation at Brolo. When the Army CP shifted to Cap d'Orlando the same service was maintained, with the addition on 17 August of a direct link to the 3d Division by means of an SCR-193 in a scout car.

Traffic reached 15,000 code groups daily and the shortage of operators was so acute that the average was 1.9 per set. The situation

27. 1st Armd Sig Bn--TAG, 27 Aug 43; 1st Armd Sig Bn,...Log...; Sig Opn, pp. 99-100; SCTIL No. 30, pp. 18, 20.

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95

was eased somewhat by employing motor messengers for short haul routes, but there was no more than a bare minimum of sets available and to open an additional station required closing one in operation. Besides, excessive length and over-classification continued to be characteristic
28
of messages.

The message centers continued to operate in three shifts. During the stay at San Stefano 8,000 code groups were handled daily, 6,000 at Cap d'Orlando. Scheduled and special motor messengers linked the Forward CP with II Corps Hq. near Petralia, 3d Division at Misilmeri, Provisional Corps at Palermo, 2d Armored Division at Monreale, 82d A/B Division at Trapani, and Agrigento. The message center at Palermo was turned over to the 51st Signal Battalion on 10 August; the 1st Armored Signal Battalion had to loan the 51st, for this work, two code clerks
29
and one M-134-6.

The bulk of the 51st Signal Battalion had arrived at Palermo on 2 August, leaving a small detachment behind at Bizerte to operate the message center and radio nets for Seventh Army Rear. Company "A" returned to Battalion control soon afterwards, except for one detachment on duty with the 142d Armored Signal Company to help it build open wire lines. The 51st then relieved the 1st Armored Signal Battalion, taking over

28. Sic Opn, pp. 99-100; 1st Armd Sig Bn--TAG, 27 Aug 43; 1st Plng O-SigO, Seventh Army, 31 Aug 43.

29. 1st Armd Sig Bn--TAG, 27 Aug 43; Sic Opn, p. 100.

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96

from it on 6 August the responsibility for communications at Seventh Army Hq., Palermo.

Headquarters Company operated Army message centers at the Post Office and the Royal Palace, and a tactical signal depot. Its telephone repair section serviced in one week over 200 instruments; the radio repair section not only repaired radio sets but served as sound and motion picture men. Company "B" handled all telephone and teletype switchboards for Seventh Army in the Palermo area. It promptly replaced two TC-2's with one 3-position TC-1, restored to working condition a 10,000-line Erickson automatic dial system, and operated several teletype installations in the town. One telegraph and three telephone carrier systems were superimposed successfully on 70 miles of rehabilitated open wire without either transposition or carrier repeaters. Detachments of "B" Company also installed and operated switchboards at four hotels in Palermo, at Cefalu, at Termini, and at Provisional Corps Hq.; set up a captured Italian switchboard for the Navy's use at Palermo; and put in a telephone carrier terminal at Trapani for 9th Division Hq.

"A" Company rehabilitated and maintained the Palermo--Trapani line; "C" Company, that between Palermo and Cefalu. Wire teams bivouacked at several points along the routes and worked with the wire chief at Palermo clearing troubles. All three companies, "A", "B", and "C", helped repair the underground cable plant in Palermo. Personnel from the 51st Signal Battalion also rehabilitated the cable and open wire linking Palermo with Agrigento and Caltanissetta, and operated some

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97

Provisional Corps radio nets.³⁰

A pole line was built in the Palermo dock area by teams from the 51st and the 814th Signal Port Service Company, assisted by some prisoners of war.³¹

The signal intelligence staff had realized "on or about D plus 7" (17 July) that events were moving ahead so rapidly that the time had come to send the 128th/849th from North Africa to Sicily. But it required more than three weeks to accomplish the transfer. The morning after arriving at Palermo, 10 August, headquarters detachment and the team assigned to Seventh Army went to its CP at San Stefano, beginning operations that afternoon. The team earmarked for II Corps joined that headquarters at Cesaro on the 12th. The third team, originally intended to serve 3d Division, Reinforced, was held at Hq Seventh Army "in compliance with the general policy of not placing these units below Corps level", and acquired there what experience it could. The 128th was on the job "within 30 minutes after its arrival at the front" and did "very valuable work".³²

The First Mobile Radio Broadcasting Company, designed to do psychological warfare work near the front, arrived in North Africa late in May 1943, and was not able to begin operations in Sicily until 15 August. Located in Palermo, the Company was confined to ordinary broadcasting -- in association with the Second Broadcast Station Operating

30. 51st Sig Bn, Opn "HUSKY", Pt. I, 25 Aug 43; Hist of the 51st Sig Bn, 1943.

31. 814th Sig Port Serv Co, Rpt...Opn "HUSKY", 24 Aug 43.

32. Sig Opn, p. 115; 128th Sig RI Co--Seventh Army, 21 Aug 43; 128th Sig RI Co--~~FAO~~, 14 Jan 44; Dep CSigO, AFHQ--CSigO, Fifteenth Army, 23 Aug 43, par 9.

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98

33

Detachment, which arrived on the scene about the same time.

On 7 August, the 71st Signal Company (Special), which had been furnishing communications in southern Sicily for the 36th Engineer Regiment, returned to Fifth Army Hq. in North Africa. Its responsibilities were assumed by the 229th Signal Operations Company, which took over also about this time the communications at Hq. 1st Engineer Special Brigade and Hq. 40th Engineer Regiment, handled until then by the 286th Signal Company (Composite) and the 74th Signal Company (Special), respectively.

34

II Corps Units. The 3d Signal Company continued, in the concluding phase, to operate under unusual difficulties. Once it was necessary (14 August) to move an entire CP by jeep, because a section of road along a cliff had been blown out and the initial engineer bridge would not take anything heavier.

For the amphibious envelopment at San Agata, 8 August, the 2d Battalion (30th Infantry) landing team was furnished an SCR-299 mounted in a DUKW and an SCR-193 in a jeep, to work in the Division Command and Division Commander's nets, respectively. Low railroad underpasses and rough terrain prevented the former from moving inland to the battalion CP. The latter, however, was quite successful, and two SCR-193 installations were employed in the subsequent amphibious operation at Brolo,

33. 1st Mobile Broadcasting Company—SOS, NATOUSA, 9 Oct 44; 2d Broadcast Station Operating Detachment—CG, NATOUSA, n.d.

34. Hist of the 71st Sig Co, Special (Lt. P.H. McGorkle); Chamberlain Pool Rpt, 15 Jan 44, p. 5.

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99

11 August. On one occasion when the infantry occupied a hill position where no vehicle could follow, the officer and crew with the set displayed "extraordinary courage", continuing to operate from an exposed position on the flat ground outside the main lines. ³⁵

After the conquest of Troina, the 1st Division was relieved for a few days rest and assembled around Cerami, where a new CP was set up. With the troops' return to the line on 13 August, east of Randazzo, the CP was transferred to a location seven miles west of the town. "Field wire lines were over-extended, but wire communications were accomplished with a normal degree of success". Once again, on 14 August, a switching center was installed to conserve field wire -- about two miles east of Randazzo. ³⁶

The 9th Division arrived at Palermo on 31 July and disembarked two days later. By 3 August an advance group of the 9th Signal Company had reached the Division CP just west of Cerami, and the remaining personnel rejoined them on the 4th. Assisted by a radio team from the 78th Division of the British Eighth Army -- then operating on the 9th Division's right flank, the company furnished communications in the battle of Troina and on 8 August, after the town's capture, opened a new CP east of it. In the ensuing action, new installations were established "almost every second day" and it became "practically impossible" to meet the demand for field wire. During the 42-mile advance

35. 3d Sig Co--3d Div, 28 Aug 43; 3d Div--Seventh Army, 26 Aug 43; SCITH No. 31, pp. 50-53.

36. 1st Sig Co--TAG, 8 Aug 43, p. 2.

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from Cerami to the last CP near Randazzo, the signal company had served the division (less one RCT with "Task Force X") and an attached battalion of Goums (French Colonials).³⁷

D. Miscellaneous Data

This section includes several reports that cannot be used in the framework employed above.

The 53d Sig Bn. The following figures indicate in part what the wire construction personnel of the 53d Signal Battalion accomplished in the Sicilian campaign.³⁸

Work done	25 July--18 August Campaign		
	"A" Co.	"C" Co.	"C" Co.
Instln & Maint, W-110-B	210 mi	104 mi	145 mi
W-143	32	35	35
Spiral-four	300	58	275
5-pr cable	25		
10-pr cable	3 $\frac{1}{2}$		
RPL	3 $\frac{1}{2}$		
Rehabilitation of open wire	107 cct mi		
Construction on existing poles, OW	96 " "		

The rapidity of movement and lack of commercial wire facilities along the Corps axis made it difficult to furnish telephone and teletype communication.

37. Company History of the 9th Sig Co, 1 Aug 40--1 Oct 43.

38. From the 53d Sig Bn's Report on Operation "HUSKY" Pt I.

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Open wire was rehabilitated wherever possible, but in many cases time did not allow any installation other than Spiral-four cable from Corps to Division trunks. Spiral-four proved unreliable owing to extensive sabotage, roadside fires, and the vulnerability of the equipment to the pressure of heavy vehicles that pulled off the roads at unexpected places.³⁹

The Wire Operations Company's job was considered normal, apart from the frequency of CP displacement.⁴⁰

Corps CP's forward	11
" " rear	4
Switching centers	12
Average no. locals, CP forward	40
" " trunks " "	30
" " locals, CP rear	25
" " trunks " "	30
" " daily troubles, all lines	23
" " booked calls per day, CP fwd	100
" " " " " " CP rr	70
" " estimated calls per day, CP fwd swbd	10,000
" " group count, teletype, fwd and rr	2,500

The 53d Signal Battalion maintained radio communication almost continuously with all subordinate units, the only breaks being those caused in the early morning hours by atmospheric disturbances. While the distances involved were not excessive, the effectual transmission range was reduced by the mountainous terrain; flat-top antennas were utilized often. Six nets were "habitually" operated -- to all divisions under Corps and to the Corps Artillery Brigade, Army, and (British) XXX Corps. The transmitters were generally in the Battalion bivouac area

39. Off of Dir of Intell, ASF, Statistical Data...

40. 53d Sig Bn, Rpt on Opn "HUSKY" Pt I.

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about one mile from the CP, remotely controlled from a location near the message center. The daily average of messages is reported by one source⁴¹ as 53, by another as 65.

Message center operations differed little from those of the later stages of the Tunisian campaign. Rapid movement meant frequent loss of contact by wire, and to employ radio meant enciphering all messages. Cipher personnel averaged 4,000 code groups a day; the M-209 was used at first, the M-134 more often, later. The establishment at forward Corps Hq. of a portion of the AG Section was of considerable help in issuing SOI. Each day saw 140 messages sent by electrical means and about 1150 dispatches. There were three scheduled messenger runs each day -- to divisions, separate Corps units, and Corps Rear. Bad road conditions in eastern Sicily frequently delayed the messengers, but staff officers found the service sufficiently reliable to make very few requests for special messengers.⁴²

⁴³
Pigeons were not used.

The 3d Signal Company. The radio operations of the 3d Division for the "land phase", 15 July--17 August, have been summarized as follows:⁴⁴

Type	Groups	Messages
EMC	50,772	520
M-209	15,499	352
JT OP	- - -	-
CODEX	228	9
Clear	- - -	311

41. Off of Dir of Intell, ASF, Statistical Data...; 53d Sig Bn, Rpt on Opn "HUSKY", Pt. I.

42. See Note 41.

43. Off of Dir of Intell, ASF, Statistical Data....

44. 3d Div--Seventh Army, 26 Aug 43, Pt. I, App. 7, 9

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103

The 1st Signal Company. Radio communications in the 1st Division were on occasion so extensive as to involve two SCR-299's and nine SCR-193's, disposed as follows:

1 SCR-299	CP, Air Support net
1 "	Airport, "
2 SCR-193	Corps net
1 "	CP, NCS of Division Command net
3 "	At Combat Team CP's, Division Command net
1 "	At Goum CP, same net
1 "	Division RCN net

The remaining SCR-193 was employed at one time or another at the Division Advance CP in the Division Command net, for a unit held in reserve or a unit attached to the Division that required communications, or as a link with adjacent British units. The Goums were provided with an SCR-284 as well as a 193, and when operating in the mountains frequently utilized the latter as a relay station.⁴⁵

The 82d A/B Signal Company. Concerning the signal plans and operations of airborne troops in the Sicilian campaign, "no answers available" is the only statement in the records available.⁴⁶

Supply. Among the major signal items required for Sicily "only" (?) were⁴⁷

Cable, rubber	316 mi	Switchboards	20
" , spiral-four	800 "	Telegraph terminal sets	6
" , lead-covered	91 "	Telephone " "	6
Power Units PE-75/95	17	Telephone Cen. Offices	30
Ringer Sets	25	Telephones	1500
RPL materials	300 mi	Wire, Field	3000 mi
Repeater sets	174	" , Long-range	1700 "
	Wire bare copper	1150 mi	

45. 1st Sig Co—TAG, 4 Sept 43.

46. Questions for AGF Observer Bd, NATOUSA, Answered by Signals, AFHQ, 16 Oct 43, p. 1.

47. Extract from Report of Sicilian Campaign, 6 Sept 43

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104

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In the period 29 July--24 August, the 814th Signal Port Service Company handled approximately 5,000 miles of field wire, 2,500 of combat wire, 4,000 of cable assemblies, and 100 of RFI; two and a quarter million batteries. Also, 500 radio sets were "received and checked".

48

48. 814th Sig Port Serv Co, Rpt of...Opn "HUSKY", 24 Aug 43.

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CHAPTER V

PROBLEMS AND LESSONS OF THE SICILIAN CAMPAIGN

In this chapter the record of communications in the Sicilian campaign will be examined topically: the plans and organization, the communications operations, and the men and matériel.

A. Plans and Organization

Planning and Coordination. The principal obstacles during the planning and mounting stage were the short time available and the great distances between planning groups and units in training. The general importance of making decisions early seemed obvious; only thus could the signal plan be properly formulated and the necessary troops and equipment arranged for. There were particulars, however, that competent critics believed worth specific reemphasis. Time was required

by subordinate units for detailed planning after receiving plan from higher headquarters...

for special training of units, some of which cannot be begun until after major planning decisions of higher headquarters are revealed, but most of which can proceed concurrently with subordinate unit planning...

for special distribution of vital information such as the newly approved link sign procedure to units mounting from the United States (which in turn involved additional training time), distribution of radio frequency assignments to units mounting from the United States and United Kingdom (which involved calibrating and setting all radios on assigned frequencies before waterproofing and sealing), and distribution of SCI items in general.

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1. Hq 15th Army Group, Notes on Signal Communications of U.S. Troops in Operation "HUSKY", October 1943 (referred to below as "15th AG Notes") p. 1.

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Furthermore, there was no point in prescribing the use of equipment not already on hand unless time were available to secure it, and the equipment the troops did have could be checked and waterproofed only if they arrived at the staging area some time before the last minute. ²

As for restricting operational plans to a small number of persons in the interest of security, too much caution might easily delay important action. Officers controlling the issue of training equipment, for instance, were temporary ¹¹ a stumbling block because, knowing nothing of the action contemplated, they at first declined to release certain items to the troops preparing for it. That they could be furnished the necessary information without endangering security was proven in the course of this operation. ³

The effects of inadequate time were greatly aggravated by the distances separating the six planning groups and the tactical units. Since personal contact was essential and considerations of security forbade utilization of the telephone, much time was absorbed in officer travel; fortunately, a large portion of it could be accomplished by airplane. Yet there was only one meeting of all the principal Signal officers. Certain factors such as the location of supply centers, training areas, and construction facilities made separation unavoidable. But the disadvantage could have been minimized, it was believed,

2. Northwest African Air Force--CG, Army Air Forces, Operation "HUSKY"; Signal Communication, 21 Aug 43, p. 1.

3. 15th AG Notes, p. 2.

DECLASSIFIED

107

had the major planning groups been located in the same general area, the training left entirely to the tactical commanders, and the responsibility for liaison between them and the top planners placed on the shoulders of the "detail planners".⁴

Four additional factors contributed to these difficulties. First, responsibility for organizing supply planning was divided between two offices. Second, for lack of adequate planning, as well as the shortage of service troops, base area communications were simply left to the tactical organizations. Third, while the plans were in flux up to the last minute, the allotment of space for signal equipment did not keep pace with the increasing commitments of other elements that would need the equipment; and since the campaign was more successful than expected, the shortage of communications personnel and equipment soon became serious--all field wire being used up before the first follow-up convoy arrived.⁵

Fourth, the coordination of requirements among the Army, Navy and Air Force was faulty. "All sections of the Air Corps", in particular, "seemed to be working independently"; supervision--even by the Air Corps itself--was lacking. Thus "requirements were never made

4. 15th AG Notes, pp. 1-2; NWAAF--CG, AAF, 21 Aug 43, p. 1

5. Sig Sply O--Sig O, Seventh Army, 20 Aug 43, par. 9; 15th AG Notes, p. 2; Sig Opn, p. 128; NWAAF--CG, AAF, 21 Aug 43, p. 1.

DECLASSIFIED

108

DECLASSIFIED

known until the last possible moment", requests filed before the operation were greatly exceeded by those made during the operation, and the installation of Air Force communication channels was frequently delayed--notably in cases where ground force signal troops were depended upon to do the job. Obviously, Air Force needs must be more carefully formulated and coordinated.⁶

Loading. The landings were successful partly because the proper priorities had been established. The 1st Signal Company, for example, attached fully equipped radio and wire teams to each Combat Team, and divided the remaining men and equipment between the Division CP and alternate CP. In the case of units split into assault and follow-up echelons, however, some observers found a loss of efficiency inherent in the arrangement that was not worth "the few advantages".⁷

Nor was the preparation of supplies entirely satisfactory. Although the Army Signal Supply Officer indicated on the requisitions which items were to be given special packing to withstand possible immersion in salt water and rough handling over beaches, the job was not done well enough in all instances to prevent damage. It was recommended that, in the future, a tactical signal officer with experience in beach landings supervise "enough of the packing in the beginning to assure himself that the base section is doing it properly

6. 15th AG Notes, p. 1; Sic Opn, p. 128; Wire O--Sig O, Seventh Army, 22 Aug 43.

7. 1st Sig Co--Seventh Army, 29 Aug 43; ~~CONFIDENTIAL~~, 21 Aug 43, p. 2

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and to instruct them if they are not".

The Separation of Men from Equipment. It was realized that signal personnel must accompany their equipment not only to protect the equipment but to guarantee successful communications. There was "some" separation in shipment; several wire teams were useless ashore for lack of construction materials, and an armored radio company was hampered because it landed incomplete. But in this respect, as well as in many others, operation "HUSKY" was far more satisfactory than operation "TORCH".⁹

Operational Organization. The amphibious attack on Sicily sustained the belief that signal sections, along with CP's as a whole, should be divided into main and alternate groups as insurance against the sinking of a headquarters vessel. Experience in the land operations that followed demonstrated the desirability of splitting the Army signal section into two echelons corresponding to the two CP's--the one tactical, the other administrative.¹⁰

The organization of supply was much less happily conceived, responsibility being divided between the Army Signal Supply staff and

8. 15th AG Notes, p. 3.

9. Sic Opn, p. 128; Exec O, Seventh Army Sig Sec--Sig O, Seventh Army, 18 July 43; Wire--Sig O, Seventh Army, 22 Aug 43, p. 2; Wire O--Sig O, Seventh Army, 21 July 43; Radio Planning O--Sig O, Seventh Army, 20 July 43.

10. Sic Opn, p. 128.

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110

the 1st Engineer Special Brigade (under G-4 supervision). The former thought operations would have been far more efficient under unified control.

Signal Staff and General Staff. The solution of all the problems mentioned above depended in some measure upon the relations between the signal staff and the general staff. The soundness of those relations seemed exceptionally important in the preparation of troop lists, communications requirements, and signal supplies; in avoiding such misfortunes as a lower headquarters directive stating that in case of a shortage of shipboard space signal personnel should be left behind; in the smooth functioning of daily operations dependent upon information from G-2 and G-3 such as the locations of units; and in the conduct of the message center. In connection with the last item, particularly, the signal staff urged that all staff officers be taught the functioning, capabilities, and limitations of signal communications, and the proper manner of writing and classifying messages.

The message center was the scene of much friction--as it had been before in operation "TORCH". High-ranking staff officers wrote messages frequently too long and sometimes unintelligible, overclassified

11. Sig Sply O--Sig O, Seventh Army, 20 Aug 43; Storage & Issue O--Sig O, Seventh Army, 21 Aug 43.
12. S & I O--Sig O, Seventh Army, 23 Aug 43; Asst Sig Sply O--Sig O, Seventh Army, 21 Aug 43; Sig Sply O--Sig O, Seventh Army, 20 Aug 43, par. 1; Maj. Crook--Dep CSigO, AFHQ, Signal Communications in Sicily, 24 July 43, par. 13; Personnel O--Sig O, Seventh Army, 21 Aug 43; Administrative O--Sig O, Seventh Army, 20 Aug 43; 45th Div Sig O--Seventh Army, 22 Aug 43; Pt I, Sig Opn, p. 138.

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them, brought them to the message center personally, and stood at the radio operator's shoulder~~s~~ to assure immediate transmission. There was a case of a scheduled messenger being delayed for three hours by a staff officer working on a message; in fact, the messengers were even used for the "convenience of the staff in their personal duties". Complaints were voiced about delays in the delivery of messages to addressees whose location was unknown to the message center.

It was recommended that staff officers be taught the function of the message center and the proper duties of messengers, that the priority classifications of messages be worked out with all staff sections in advance and supervised closely by the Chief of Staff or the Secretary of the General Staff, and that the message center be so designed as to permit access only through the message center office. Further, it was pointed out that messages could be delivered more quickly if G-3 furnished the locations of the addressees. (The first three conclusions applied primarily to message center operations afloat; the last, to those ashore.)

B. Communications Operations

Message Center. The War and Navy Departments had not agreed on a design for headquarters ships until February 1943, and it had been

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13. Admin O--Sig O, Seventh Army, 20 Aug 43; Code & Security O--Sig O, Seventh Army, 20 July 43; Sig O, Seventh Army, Communication Lessons of the Sicilian Campaign, 10 Aug 43; Maj Crook--Dep CSigO, AFHQ, 24 July 43, par. 4.

DECLASSIFIED

DECLASSIFIED

112

possible to turn out only one such vessel by 24 April. Consequently, all the others used to invade Sicily were improvised, and much the same problems were encountered as in operation "TORCH". It was therefore believed that more radio sets and code machines were necessary; that temporary radio installations on deck were unsatisfactory, that each radio set should be put in by an expert and served by three operators, and that these men should be the best available. There was no doubt about the necessity for separate channels for each major service; an Air Force observer advised furnishing the Air Force with a completely separate message center. More space was essential--for both men and equipment. Largely for that reason it seemed vital that more true headquarters ships be provided. Above all, since these vessels "constitute almost the entire framework of " amphibious communications, they "should be treated as a major subdivision of the signal plan".¹⁴

A message center afloat scheduled to move ashore, it was pointed out, should not disembark until another message center was fully set up on shore.¹⁵

Message center operation, both afloat and ashore, was still

14. Theaters Sec--Admin Sec, Off/Plng Dir, 29 Jan, 5 Feb, 24 Feb, 24 April 43; Maj Crook--Dep CSigO, 24 July 43, par7; Lt. Dunn--Sig O, Seventh Army, 20 July 43; Sic Opn, p. 112; 1st Div Sig O--Seventh Army, 30 Aug 43; Rad Plng O--Sig O, Seventh Army, 20 July 43; NWAAF--CG, AAF, 21 Aug 43, pars 8,10; Sig O, Seventh Army, Communications Lessons of the Sicilian Campaign, 10 Aug 43, p. 1; 15th AG Notes, p. 3.

15. Lt Dunn--Sig O, Seventh Army, 20 July 43.

DECLASSIFIED

DECLASSIFIED

113

plagued by familiar difficulties. Messages were too long and over-classified, messenger schedules interfered with. It was recommended that a Force message center, as the "nerve center" of operations, be supervised by at least two "mature and seasoned" officers of field grade; that the staff officer approving outgoing messages also assign the security and priority classifications. The 3rd Division reported avoiding message center delays by using its message center only for administrative traffic--except for communication to higher headquarters.
16

In addition to well known problems, this campaign appears to have drawn attention to the need for a clearer line of distinction at headquarters between the functions of the Adjutant General mail and distribution sections on the one hand, and the message center on the other. Concern was also expressed over the delays caused by the practice of placing addresses in the body of a message to be relayed rather than in the address of the message.
17

Messengers. Experience in this operation led to three recommendations in addition to those bearing on the proper treatment of messengers. An amphibious landing, it was believed, called for the organization of a

16. Rad Plng O--Sig O, Seventh Army, 20 July 43; Dunn--Sig O, Seventh Army, 20 July 43; Report of Operation of the U.S Seventh Army in the Sicilian Campaign, 10 July--17 Aug 1943, Preface, par IX; Sic Opn, p. 138; 3d Division--Seventh Army, 26 Aug 43, par. 15.

17. Sic Opn, p. 129

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114

boat messenger service utilizing small, fast, power boats. Piper Cub planes, likewise, were thought essential to the proper functioning of the messenger service at higher headquarters. Finally, it was proposed that a regular officer courier service be arranged; requisitioning signal officers for that work (for which the T/O's made no provision) took them away from their own jobs.

Radio Operations. The prearranged schedules were followed closely in the landings. Radio silence was broken before H-hour only once—to announce a change in H-hour, and sets were landed and ready to operate just as planned. The SCR-299's in DUKW's were outstanding in this respect. Yet it was recommended, for greater certainty, that in future operations every important vehicular radio station be preceded ashore by a portable set in a two-wheeled cart. Also, it was believed that a complete armored radio company should be beached from two LST's to establish FM channels between the far shore and the headquarters ship.

The records show 104 messages sent on 10 July, 115 on the 11th and 158 on the 12th. This performance was on the whole satisfactory, but it left something to be desired. Observers concluded that Army,

18. Sic Opn, pp. 128,139; Dunn--Sig O, Seventh Army, 22 Aug 43.

19. AFHQ, Notes on "HUSKY" Landings 23 July 43, Sec IV; Maj Crook--DepCSigO, 24 July 43, par 5; 15th AC Notes, p. 5; Rad Ping O--SigO, Seventh Army, 20 July 43; 1st Div Sig O--Seventh Army, 30 Aug 43.

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Navy, and Air Force must have separate channels and that the Army should have more high-powered and other sets than were provided. Specifically, an organization of corps or larger size required three command channels, one to higher headquarters, one FM ship-to-shore, four monitoring receivers, and one spare receiver and transmitter. Furthermore, administrative traffic must be excluded from tactical channels during the assault phase, and the bulk of the traffic in the first 48--60 hours should be travelling up the chain of command rather than down.²⁰

The "SNOL" (Senior Naval Officer, Landing) and Beachmaster circuits were "seldom" satisfactory, owing to the operators' lack of training and experience. The Fire Support net, on the other hand, worked very well, artillery personnel carrying ashore jeep-mounted SCR-193's over which Naval Liaison officers directed naval fire.²¹

One division signal officer thought it worth while to re-emphasize the advantages of key transmission over voice in speed, accuracy, security, and range. He urged more use of it, except in the lower units.²²

While the Navy TBS radio set was considered a nuisance on

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20. Sic Opn, pp. 111,129,135; Sig O, Seventh Army, Communications Lessons..., 10 Aug 43, p. 1; Dunn--Sig O, Seventh Army, 20 July 43; Rad Plng O--Sig O, Seventh Army, 20 July 43; Annex to Notes..., p. 10; Exec O Seventh Army Sig Sec--Sig O, Seventh Army, 18 July 43, par 4.
21. Col A. H. Read, Notes on the Planning, Training, and Execution of Operation "HUSKY", n.d., par 51; Sic Opn, p. 15; 15th AG Notes, p. 6.
22. 1st Div Sig O--Seventh Army, 30 Aug 43.

DECLASSIFIED

116

account of its interference with others, few complaints were registered concerning Army radio equipment. One source reported the SCR-609 too heavy, another the SCR-284 too susceptible to damage from moisture; the 1st Division had trouble with ship-to-shore links. But praise was offered freely to the 536, the 600-series, the 193, and the 299; and the rubberized carrying bags were greatly appreciated. In connection with the special mounting of the 299, it was noted that space requirements dictated using the power unit PE-75 while the set was in the DUKW, but that for sustained operation it must be replaced as soon as possible by the more powerful PE-95. Further, the mounting must be of such a character as to allow for a quick transfer of the radio set from the DUKW to a regular 2½-ton truck--thereby making the latter available for additional amphibious service. Two 299's could be run on one PE-95, keeping the other in reserve. Operations must start with fresh storage batteries.

The daily total of messages transmitted ashore, 12 July-17 August, varied from 109 on 25 July to 337 on 16 August, with the average gradually rising. From these operations also some lessons were learned--rather, some old lessons were relearned. Radio was found to play a primary role, in combination with messengers, until wire was available; thereafter, it should be reserved for emergency. The SCR-536

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23. Crook--Dep CSigO, 24 July 43, pars 6-8; 1st Engr Brgd--Seventh Army, 24 Aug 43, Pt II; 1st Sig Co--Seventh Army, 29 Aug 43, p. 2; AFHQ, Notes...Sev IV, p. 3; 1st Div Sig O--Seventh Army, 30 Aug 43; Sig O, Seventh Army, Communications Lessons..., 10 Aug 43, p. 3; Annex to Notes..., p. 10; Exec O Seventh Army Sig Sec--Sig O, Seventh Army, 18 July 43, par. 7.

DECLASSIFIED

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served as a company-platoon set and its former place in battalion-company communications was taken by the 511, with the success predicted on the basis of experience in the North African campaigns. Although the range of possible frequency assignments was severely limited by the number of crystals available, companies in adjacent regiments were able to employ identical groups of SCR-536 frequencies without interference worth complaint.

24

Operations in motion in mountainous terrain posed special problems. It was essential to have three operators per set and alternate frequencies for day and night communication. Furthermore, it must be understood that when contact was lost, the radio station should halt, reestablish contact, clear urgent traffic, and get back in the column as soon as possible.

25

As for equipment, mounting the SCR-299 in the familiar panel truck was deemed "unsatisfactory" for lack of necessary working space, because of ease of recognition by hostile aircraft, and because operation under blackout conditions was practically impossible without suffocating. Neither the half-track nor the scout car was regarded as a suitable vehicle for the SCR-299. It was recommended that the Signal Corps use "standard rather than special types of trucks". (This applied to the SCR-193 also.)

26

24. Sic Opn, p. 111; Sig O, Seventh Army, Communications Lessons..., 10 Aug 43, p. 2; Exec O Seventh Army Sig Sec--Sig O, Seventh Army, 18 July 43, par 2; S.L. Jackson, "Signal Communication in the North African Campaigns" (1945), p.

25. Sig O, Prov Corps--Seventh Army, 24 Aug 43.

26. Sic Opn, p. 190.

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DECLASSIFIED

118

The FM radio link equipment was used again with highly satisfactory results, the service between Tunis and Malta proving its ability to span large bodies of water. The only drawback was that, as in the Tunisian campaign, German radio nets operated when possible on frequencies close to those of the link system--to avoid Allied interception;
27
the link system had to cease operation for a while.

Radio Procedure. The weight of opinion on Link-Sign Procedure was unfavorable, so far as its use above division was concerned. It was opposed in general by the Chief Signal Officer and Army Communications Board (Case No. 73, 4 May 1943), and it was agreed on 23 July 1943 that Operations Division, WDGS, would discuss with the theater commanders the advisability of dropping it and reorienting the training program to
26
the old procedure.

Wire. Lateral communication on the beaches broke down because vehicles cut the wire. Nor was it only a matter of assault wire and Spiral-four cable--both notoriously susceptible to that type of damage. "Wire of any type" would be unreliable on beaches, it was pointed out; other means of communications must be depended on in amphibious assaults. On

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27. [Perkins], Report of Operations, FM Radio Relay System for AFHQ, North Africa, 8 Sept 43.
28. 2d Armd Div Sig O, Rpt of Lessons Learned in Operation "HUSKY", Pt II, p. 1; Maj Starr--Sig O, Seventh Army, 21 Aug 43; Rad Ping O--Sig O, 31 Aug 43; Rad Opns O--CSO, Comments on Radio Communications in the Sicilian Campaign, n.d.; Theaters Sec-Admin Sec, Off/Ping Dir, 4 May 43; Daily Digest, Staff Divisions, OCSigO, 27 July 43, II: 1.

DECLASSIFIED

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the other hand, a division signal officer reported that in normal land warfare wire communications could be maintained even during a rapidly moving attack—"as long as the front-line troops are not motorized but are moving on foot". This was made possible, in part, by mounting Reel Unit RL-31 in a jeep; it was recommended that the unit be furnished in that manner. Neither manual telegraph nor teletype was employed very much—the latter mainly for classified messages; trouble was reported with the relays in the TC-5. One division stated that it never used its teletypewriters or TC-3 at all, that telegraph procedure was lacking and that the BD 71 and 72 were too heavy for amphibious or mountain operations. The field telephones EE-8A fared badly in salt air and blowing sand; 25% of the Engineer Special Brigade's were damaged²⁹ beyond local repair.

Long-range field wire was available only in limited quantities, but what was used was liked. It was recommended that twisted pair, W-143, be provided in the future for long corps and division³⁰ lines requiring speedy construction.

Considerably more Spiral-four cable was on hand, and 1800 miles of it were laid by ground force signal troops. Experience with this equipment in North Africa may have contributed to the measure of

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29. AFHQ, Notes on "HUSKY" Landings, 23 July 43, Sec IV, p. 3; 15th AG Notes, p. 6; 1st Div Sig O—CG, Seventh Army, 11 Aug 43; Chamberlain Pool Rpt, 15 Jan 44; 3d Div—Seventh Army, 26 Aug 43, Pt I, par 17, Pt II, par 1; 1st Engr Spec Brgd—Seventh Army, Report of Lessons Learned in Operation "HUSKY", 24 Aug 43, Pt II.
30. Wire O—Sig O, Seventh Army, 22 Aug 43, p. 2; Hammond—Tully, quoted in Tully—Moran, 25 Aug 43, par 2.

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success achieved, but many more lessons remained to be learned in Sicily. Spiral-four was reported by one source to be "extremely temperamental": reels with "perfect continuity" and no cross talk would, after being paid out, develop cross talk "for no apparent reason".³¹

³²
Another explained the problem thus:

It must be handled very carefully and cannot be paid out as rapidly as field wire. Undue tension causes opens and shorts, particularly if it occurs close to the connectors. Cable laid on the ground is subject to damage, particularly from vehicles crossing it and from enemy sabotage. Spiral-four cable has been used successfully when suspended but care must be exercised in paying it out from the reels, suspending it at close intervals (damaged open wire can be improvised as a messenger cable), and subjecting it to minimum tension.

It was realized that part of the difficulty might be attributed to lack of experience. But many signal officers felt that in the time necessary to install Spiral-four properly they could erect open wire circuits.³³

Equally serious was the problem of maintenance. Whereas long-range field wire looked much like other field wire, the size of Spiral-four was an invitation to sabotage. On long-range field wire, if one circuit of the carrier were interrupted the other could be used as a single channel with telegraph simplex; Spiral-four was so designed that a break in one circuit usually meant the breaking of all. Some

31. Sic Opn, pp. 111,130.

32. 15th AG Notes, p. 7.

33. Wire O--Sig O, Seventh Army, 22 Aug 43, p. 2; Lt. Col. J.P. Berkeley, USMC, Report of Visit to European and North African Theaters of Operation, 8 Oct 43, Sec V, par. 18.

DECLASSIFIED

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repair crews rigged up terminal strips with cable stubs attached, which could be inserted at any joint, minimizing interruption of service; but even that failed to eliminate the necessity of breaking continuity to test. Spiral-four repairs took "considerably longer" than long range field wire repairs, and the rehabilitation of open wire was "in many instances" thought preferable.³⁴

In sum, Spiral-four was held to be "excellent when it works", but "completely unreliable". One report advised its future use only in rear areas; others doubted its value anywhere in "field" operations.³⁵

Sicilian open wire was found to be nearly unusable. Although it had not always been damaged, the original construction was rather crude--different sizes of copper wire with a substantial admixture of iron, and no transposition. To utilize such facilities for telephone as well as telegraph, and to superimpose carrier channels, more rehabilitation was necessary than was worth while (ground force signal troops rehabilitated 950 pole line miles, 2457 circuit miles, and 4916 wire miles); building entirely new lines would have been easier. In any case, the attachment to division signal companies of construction teams from a construction company was considered a good practice that ought to be adopted as SOP. Lower echelon personnel were warned, however, that they

34. 15th AG Notes, p. 7; Sic Opn, p. 130.

35. Berkeley, Rpt, ..., 8 Oct 43, Sec V, par. 18; Hammond-Tully, quoted in Tully-Moran, 25 Aug 43, par 21; Sic Opn, p. 130; Annex to Notes on Sicilian Campaign, 17 Oct 43, p. 10.

DECLASSIFIED

DECLASSIFIED

122

should not try to use permanent plant until an experienced officer had inspected it. Utilization of poor lines for long-range transmission, it was noted, required Speech plus Simplex and Speech plus Duplex or similar repeater equipment.

What kind of new open wire should be built was likewise an important question. The reputation of "Rapid Pole Line" (RPL) had suffered a good deal in Tunisian operations; in Sicily, its inferiority to British "Multi-Airline" (MAL) was firmly established in the eyes of observers, the British design affording "more rapid construction with materials of approximately half the weight and volume" of RPL. Indeed, from the standpoint of speed of construction, the latter was found to be "little better than" standard open wire. There was scant doubt but that an "improved design" of MAL would be most suitable when quick construction was necessary. It was vital, moreover, that a standardized transposition scheme be prescribed by the Army Signal officer on the basis of American commercial practice, and adhered to rigidly.

Although carrier equipment was on hand, and installed early--down to Corps, its use was sharply curtailed by the large amounts of iron in the Sicilian civil circuits and the lack of transportation. One

36. Exec O Seventh Army Sig Sec--Sig O, Seventh Army, 18 July 43, par 6; Maj Crook-Dep CSigO, 24 July 43; Wire O-Sig O, Seventh Army, 22 Aug 43, p. 1; Berkeley, Rpt..., 8 Oct 43, pars 16-17; Sic Opn, pp. 111, 130; 3d Div-Seventh Army, 26 Aug 43, Pt II, par 3; Lt Col Williams--Sig O, Seventh Army, Report on Observations of Sicilian Operations, 19 Aug 43; Annex to Notes..., 17 Oct 43, p. 11.

37. Jackson, op cit., pp. ; Sic Opn, p. 130; 15th AG Notes, p. 7; Hammond-Tully, quoted in Tully-Moran, 25 Aug 43, par 21.

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123

source stated that existing carrier equipment did not furnish enough channels to justify its complexity and weight. ³⁸

Sicily's central office facilities were serviceable after rehabilitation. The Army's own switchboard equipment was thought to be better, but not ideal; provision for more dial trunk circuits seemed desirable. Seventh Army Headquarters needed TC-1's sooner than they arrived. Incidentally, every one available required repair owing to damage in shipment. ³⁹

Several conclusions were reached concerning construction policy. First, existing facilities should be preserved as far as possible, of course, but should be used only after inspection by a qualified officer; diagrams of such installations were invaluable. ⁴⁰

Second, it was nevertheless better, especially when moving forward, to erect new lines. Field wire or Spiral-four cable could be laid at the start, with open wire installed later. Attaching construction personnel to divisions for the latter purpose would not only provide for long links to division rear if necessary but save time when corps or army took over. W-110 would do within division, Spiral-four between army and corps where open wire was not available. It was far more

38. Chamberlain Pool Rpt., 15 Jan 44; Berkeley, Rpt..., 8 Oct 43, par 17; Annex to Notes..., 17 Oct 43, pp. 10,12.

39. Chamberlain Pool Rpt., 15 Jan 44; Wire O--Sig O, Seventh Army, 22 Aug 43; Asst Wire O--Sig O, Seventh Army, 23 Aug 43; Annex to Notes..., 17 Oct 43, p. 12.

40. Williams--Sig O, Seventh Army, 19 Aug 43; 15th AG Notes, p. 10.

DECLASSIFIED

~~CONFIDENTIAL~~

DECLASSIFIED

124

efficient, though, to confine Spiral-four to rear areas and employ 104 copper wire for army circuits. For Corps--division channels some preferred W-143, but since its production was not on a large enough scale even in November 1943, Spiral-four and W-110 were accepted at that time⁴¹ as the only practical alternatives.

Third, one observer urged that all wire and cable should be placed on poles as soon as possible, even at the cost of some delay;⁴² protection from vehicles was worth it.

The following priorities of traffic assignment were found⁴³ satisfactory:

1. Army (common use)
2. Air Corps (exclusive)
3. Army (common use)
4. Air Corps (exclusive)
5. Railroad Service (exclusive)
- Others Army (common use)

To carry out these construction and operation policies required information from lower echelon signal personnel as to what they were doing--in wire construction particularly. It required also the maintenance of discipline: "signal personnel in the lower units must be impressed with the serious consequences of cutting circuits of other units"; and each unit should stay in its own area of responsibility

41. Annex to Notes..., 17 Oct 43, p. 10; Wire O--Sig O, Seventh Army, 21 July 43; 3d Div--Seventh Army, 26 Aug 43, Pt II, par 3; Daily Digest, Staff Divisions, OCSigO, 10 Nov 43, II:2; Hammond--Tully, quoted in Tully-Moran, 25 Aug 43, par 21; Sic Opn, p. 130.

42. Williams--Sig O, Seventh Army, 19 Aug 43.

43. Sic Opn, p. 130.

DECLASSIFIED

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except in an extreme emergency. Besides, more construction troops were necessary; those present worked day and night—"unlike other troops".⁴⁴

Two other factors were involved: inspection of outside plant by the Wire Officer called for transportation; proper utilization of inside plant, for close liaison with Allied Military Government authorities.⁴⁵

Visual Means. The 3d Division is reported to have used yellow smoke to indicate the positions of front line troops to friendly aircraft. No other instance of communication by visual means appears in the records available.⁴⁶

Pigeons. Although the signal plan called for the employment of pigeons, lack of transportation prevented it. The Seventh Army Signal Officer believed that the birds would have been very effective in the Mountains, particularly on the surprise enveloping movements carried out under radio silence, and that the transport space required would have been warranted.⁴⁷

44. Wire O--Sig O, Seventh Army, 22 Aug 43, p. 2, 21 July 43; Williams--Sig O, Seventh Army, 19 Aug 43; Exec O, Seventh Army Sig Sec--Sig O, Seventh Army, 18 July 43; Major Crook--Dep CSigO, 24 July 43.

45. Wire O--Sig O, Seventh Army, 21 July 43; Capt. Berry--Sig O, Seventh Army, 22 Aug 43.

46. Sig Opn, p. 114.

47. See Note 46.

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Photography. Coverage of the Sicilian campaign began nearly a month before D-day, both still and motion pictures being taken of training, supply build-up, naval craft, and landing exercises. The invading forces were accompanied by 32 cameramen, two went in with the airborne troops, and the other four operated as special assignment men under the direct control of Seventh Army.

In the period 10 July - 31 August the Signal Corps sent to the War Department approximately 3,200 still pictures of the Sicilian campaign, and 56,500 feet of 35 mm. picture negative, and 1,650 feet of 16 mm. picture kodachrome. Of this material one New York newspaper alone used 13 stills in a single edition, Pathe News used 800 feet of "rehearsal" reels in its own release on that subject, and the Signal Corps motion picture studios prepared an 11-reel record of the campaign (10,244⁴⁸ ft.)

48. Sic Opn, pp 118-19,124; CSigO, NATOUSA - CSigO, Washn, 26 June 44;
Sig C Photo Center - Sig C Historical Sec, 11 July 45.

DECLASSIFIED



SC 180237

Signal Corps cameraman films enemy artillery fire
from an observation post near Cerami, 4 August '43

Intelligence and Security. The 3d Division reported little intercepting and no direction-finding. Seventh Army "Y" service (enemy intercept) and signal intelligence service had only a short time to function, inasmuch as the units involved did not arrive in Sicily until 10 August. The Seventh Army Signal Officer declared, however, that since the German Army passed low grade traffic over the air, even the few items the intelligence personnel were able to furnish G-2 were valuable enough to justify bringing the unit to the island. The corresponding British units, he pointed out, had been on hand since D plus 8--considerably ahead of schedule. In his opinion, events proved several steps desirable in any future amphibious operation: include the responsible intelligence officers in the planning work, assign the army signal intelligence officer to the advance landing group, get the unit ashore as soon as possible, preserve its composite form--some 80 radio intelligence company men and 20 attached from signal intelligence service, keep it mobile and in close physical contact with the headquarters being served (army or corps), and vest control in the officer named in the headquarters T/O for that specific purpose.

"J" service (monitoring) operated very unevenly. Although the radio intelligence platoons of the 3d and 45th Divisions were devoted entirely to that work and reported faithfully, the 1st Division was less reliable and II Corps did not participate--it was not interested in "J" service. Most of the breaches of security disclosed were tactical messages sent in the clear; other bad habits included employing

49. 3d Div--Seventh Army, 26 Aug 43, Para 19; Sic Opa, pp. 14-16, 131.

DECLASSIFIED

local codes that would eventually identify the using unit, and the transmission of officers' names. On the whole, the monitors' contribution seemed worthwhile, despite the fact that wire channels were generally preferred when available. It was recommended that all division radio intelligence platoons be placed under direct army control, regardless of the division's assignment.⁵⁰

The outstanding violations of cryptographic security were in the daily reports of G-1, G-2, G-3, and the Engineer Section. The G-2 and G-3 reports, for instance, began every day with the same phrases. It was believed that instructing the message center in enciphering would be more productive than "attempts to educate originators in the requirements of security".⁵¹

The SIGABA and M-209 cipher devices were used most widely. Less popular were the CODEX, Joint Operations Code SIGMIS, and strip systems. The Division Field Code and Air-Ground Liaison code were not employed at all; discontinuance of distribution was advised. Although the prescribed map reference point system appeared in the SOI, it was neglected in favor of various other map reference codes. Lack of training time was the explanation; it was urged that such time be found. Besides, since local codes were easy pickings for enemy intelligence, all should be coordinated by the army signal

50. Sic Opn, pp. 116-18, 138; Rad Opns O--CSO, n.d.; Hammond-Tully quoted in Tully-Moran, 25 Aug 43, par 27.

51. WOJG Tarpley--Sig O, Seventh Army, 22 Aug 43.

DECLASSIFIED

124
DECLASSIFIED

52
officer.

C. Men and Matériel.

Personnel. Ground force signal troops included 286 officers, 15 warrant officers, and 6443 enlisted men. They seem to have been adequate by and large. Yet, between furnishing semi-fixed communications in what would soon become a base area, and the needs of tactical units advancing more rapidly than had been expected, the strain on Seventh Army wire personnel was well-nigh intolerable. Only a bare minimum of construction teams were on hand, and they had to work day and night-- "unlike other troops". The Seventh Army Signal Officer had anticipated the first factor and requested "urgently" that signal service troops be provided for rear communications, but the requirements of other theaters barred approval of the request.

53
Another shortage in effect--though not in form--was produced by the replacement system and the policy of preparing new units for action by drawing experienced leaders from veteran units. The 3d Division reported difficulty because it had no officer overstrength and received no enlisted men replacements; 10 percent overstrength

52. Dunn--Sig O, Seventh Army, 20 July, 22 Aug 43; Crook--Dep CSigO, 24 July 43, par 12; 3d Div--Seventh Army, 26 Aug 43, Pt I, par 18; Rad Opns O--CSO, n.d.; Annex to Notes..., p. 9.

53. Sic Opn, p. 111; Wire O--Sig O, Seventh Army, 22 Aug 43, p. 2; Exec O Seventh Army Sig Sec--Sig O, Seventh Army, 18 July 43, p. 23; Williams--Sig O, Seventh Army, 19 Aug 43; 15th AG Notes, p. 2; Wire O--Sig O, Seventh Army, 21 July 43.

DECLASSIFIED

was requested. The Seventh Army Signal Officer was convinced that no signal unit should be sent into battle without 50 percent overstrength in junior officers and 15 percent overstrength in enlisted men. ⁵⁴

Proper utilization of the personnel available seemed to some observers to require a change of policy here and there. It was suggested that the the army signal section might well have a signal personnel officer to coordinate supply and demand. The Signal Officer of the 45th Division submitted that Signal Companies, Special, were a waste of men and equipment, and that it would be better to add a communications team and equipment to each infantry battalion. ⁵⁵

Morale played a part too. The 1st Division's Signal Officer pointed out that replacements arriving with ratings frequently knew less than the privates they were to work with; the new men should start as privates. ⁵⁶

Training. More training was considered necessary in several specialties. Radio operator replacements needed field net practice and more instruction in procedure. Construction units assigned to army headquarters must be able to handle open wire; those assigned to corps or division, both open and field wire. "Far more" training in the use and maintenance

54. Sic Opn, p. 129; 3d Div--Seventh Army, 26 Aug 43, Pt II, par 3 a (1) (b); Hammond-Tully, quoted in Tully--Moran, 25 Aug 43, par 24.

55. Lt. Palmer--Sig O, Seventh Army, 21 Aug 43; 45th Div Sig O--Seventh Army, 23 Aug 43.

56. 1st Div Sig O--Seventh Army, 30 Aug 43.

of teletypewriter equipment was in order. Cable splicers could not meet their responsibilities; their Signal Corps School training should be supplemented in the United States by "at least two weeks" of practical work as an assistant to a commercial company cable splicer. Army signal supply was a specialty different from "routine base signal supply" and personnel assigned to it needed corresponding training--at least six months of it. Signal troops must know how to neutralize mines and booby traps.⁵⁷

Overseas training, it was recommended, should be conducted by the "unit base section" under the supervision of the army signal officer, at all times except during operations. There should be centralized schools for officers and noncoms, and specialized schools with large facilities to build up specialist cadres. The Seventh Army Base Section needed only equipment to undertake the job.⁵⁸

Better coordination was held essential. Personnel who would operate non-U.S. equipment, tactical or fixed, ought to know something about it in advance. American and British radio operators serving in joint nets should become accustomed to one another before entering combat. And insofar as experience overseas led to modifications in training policies or practices, differences between theater and zone of interior training must be ironed out as soon as possible.⁵⁹

57. 1st Div Sig O--Seventh Army, 30 Aug 43; Sic Opn, pp. 128-29, 136, 189-90; Annex to Notes..., p. 10; 15th AG Notes, p. 5.

58. Sic Opn, p. 128; Maj. Starr--Sig O, Seventh Army, 21 Aug 43.

59. 15th AG Notes, p. 4; Starr--Sig O, Seventh Army, 21 Aug 43.

DECLASSIFIED

Especially important was the preparation for action of staff
60

officers:

Training of the division staffs themselves in the amphibious phase was neglected. During the final full scale division landing exercise the staffs of at least two of the three assault divisions were either ashore to watch their troops land or were on board without using the division channels of communication. It is an excellent practice to observe the assault troops closely, of course, but at least one full scale exercise should have been held with the staff directing the exercise from the ships by the use of the ships' communications.

The installations on board a headquarters ship are more complicated and involved than the staff realize before they use it for the first time, and Command Post exercises with the entire staff aboard should be held with real or simulated channels to higher and lower headquarters....

Supply Operations. 19,220 tons of signal equipment were used in the Sicilian campaign—about one-sixth of the weight of all supplies. T/BA equipment was "approximately 95% complete", and for the most part the front received what it needed. But there were important shortages—notably field wire and dry cells. The 3d Division made ends meet only by applying intensive salvage measures and, on one occasion, by sending a truck on a 200 mile round trip to the nearest source of wire. The 1st Division once had to retreat with heavy losses for lack of W-130 to contact the artillery. Another difficulty was the replacement of battle losses in radio sets; they were generally deficient

60. 15th AG Notes, p. 4.

DECLASSIFIED

DECLASSIFIED

132

61

spare parts kits.

Trouble arose also from shortages of certain special equipment. Many a radio set and switchboard was ruined by immersion in seawater because there were not enough waterproof bags. Lack of spare parts cut or cancelled the operations of many items, particularly mine detectors and SCR-299's; and the insufficient power units PE-75, 92, and 95 had to be run on a 24-hour non-stop basis---adding to the maintenance burden.

62

Special efforts had been devoted to the packing of equipment and most of it was shipped in good shape. But much was received in poor shape, and valuable spare parts were swallowed up by repairs necessary even before the equipment was put to work. It would be necessary, concluded observers, to pack equipment more ruggedly, waterproof it more carefully, mark it more clearly, and warn using units to treat with greater respect.

63

Supply Policy. Proper planning, it was clear, required the early establishment of a troop list. With a margin of three months for computing T/BA requirements, the commanders concerned could be told

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61. SCITL No. 31, p. 22; Extract from Rpt of Sic Campaign, 6 Sept 43; 3d Div--Seventh Army, 26 Aug 43, Pt I, par 16, Pt II, par 1a; Sig Sply Reqrmts O--Sig O, Seventh Army, 23 Aug 43; 1st Sig Co--Seventh Army, 29 Aug 43.
 62. Extract..., 6 Sept 43.
 63. 15th AG Notes, p. 3; Prop Handlg O--Sig O, Seventh Army, 22 Aug 43; Storage & Issue O--Sig O, Seventh Army, 21 Aug 43; Sig Sply O--Sig O, Seventh Army, Lessons Learned in Operation "HUSKY", 20 Aug 43, par 11.

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in time what was not available. Communications linking supply points and installations would be necessary, too, since captured facilities were so inferior to American equipment. Base section planners should work closely with the army signal section, and a depot company should be attached to a task force three months in advance--with no other duties. To the storage and issue sections of any army depot should always be attached one telephone and two radio repair teams from a signal repair company, and two salvage teams.

Only that equipment should be taken on an assault which would be unloaded and used during the assault phase. Return of the equipment must be checked with great care, in view of the tendency to strip temporarily issued equipment of desired parts before turning it in. In fact, all supplies landed on beaches needed protection against pilfering. Fixed-wire materials need not be considered; they should be the responsibility of the wire section rather than the supply organization.

Control was a complicated problem. There was no quarrel about the importance of a pool of equipment, under army control, from which special needs could be met as they arose. But the army signal supply officers urged also that, since they were responsible for signal

64. Sig Sply O--Sig O, Seventh Army, 20 Aug 43, pars 1-4, 10; Sig Opn, pp 138-39; Asst Sig Sply O--Sig O, Seventh Army, 21 Aug 43; Sig Sply Admin O--Sig O, Seventh Army, 21 Aug 43.

65. S & I O--Sig O, Seventh Army, 21 Aug 43; Sig Sply Admin O--Sig O, Seventh Army, 21 Aug 43.

DECLASSIFIED

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134

supply forward, all signal supply should be unified in their hands-- depots and Army Supply Points included. The 45th Division, on the other hand, having transported more than 500 tons of equipment to North Africa and then surrendered control of most of it to the Seventh Army Signal Supply Officer, objected vigorously to what it considered unwarranted interference.⁶⁶

Tables of Organization. Modification of the T/O of the infantry division signal company was desired by all. Most frequently recommended were the provision of an assistant division signal officer in the grade of major, the allotment of a captaincy to the division signal supply officer, two more radio teams and construction teams, and an increase in radio repair personnel--either directly or by regularization of the frequent practice of attaching sections from a signal repair company. Other proposals included the following: reorganize the radio intelligence platoon for intercept ("J" service) duties and drop the direction-finding section, drop the teletype section, give the division signal officer control over one construction section of a signal construction company, make the message center officer a captain and provide him with two lieutenants as assistants, assign more clerks to the message center, expand the signal company to a battalion, vest in it control of communications and communications personnel down to and including infantry and artillery

66. Sic Opn, p. 190 ; Sig Sply O--Sig O, Seventh Army, 20 Aug 43, pars 1-4, 9; 45th Div Sig O--Seventh Army, 23 Aug 43.

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135

⁶⁷
battalions.

The signal company of the armored division, it was believed, should be expanded—particularly for wire construction and operations, and reorganized as a battalion. The 142d Armored Signal Company had functioned that way on a "Provisional" basis since May 1943, following the example of the 141st Armored Signal Company in the Tunisian
⁶⁸
campaign.

The airborne signal company, since actual operations had forced upon it the role of an infantry division signal company, should
⁶⁹
be redesigned accordingly.

The main weakness noted at corps was in construction personnel. The signal battalion, it was recommended, should be flexible itself or supplemented by one construction company for each division under corps control. Also, the message center needed more clerks and maintenance men for the cipher devices; and corps headquarters should

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67. 1st Sig Co--Seventh Army, 29 Aug 43, pp. 2-3; 1st Div Sig O--Seventh Army, 30 Aug 43; 1st Sig Co--TAG, 4 Sept 43, p. 4; 3d Div--Seventh Army, 26 Aug 43, Pt II, par 3 a (1); 9th Sig Co--Seventh Army, 29 Aug 43, par 4; 9th Div Sig O--Seventh Army, 31 Aug 43; 45th Div Sig O--Seventh Army, 23 Aug 43, Pt II, par 2; Capt Berry--Sig O, Seventh Army, 22 Aug 43; Hammond-Tully, quoted in Tully-Moran, 25 Aug 43, pars 20,27; Sig Opn pp. 129,143.
68. 2d Armd Div Sig O, Rpt,...Opn "HUSKY", n.d., pp- 1-2, Jackson, Op. cit.
69. 82d A/B Div--Seventh Army, 16 Sept 43.

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be furnished a Radio Intelligence/Signal Intelligence Service Detachment.
70

The needs of a field army were held to include the following:
71

- 1 signal battalion per corps
- 1 signal construction battalion
- 1 signal operations battalion
- 1 signal service battalion--for the rear area; limited service men could be used
- 1 signal repair company
- 1 signal depot company for each two corps or fraction thereof
- 1 signal photo company (with higher ratings for the more experienced men)
- 1 photo laboratory unit
- 1 signal pigeon platoon
- 1 or more signal port service companies
- 1 signal air messenger company
- 1 "J" service signal company
- 1 Radio Intelligence/Signal Intelligence Service detachment

72

Furthermore, the army headquarters signal section required larger wire and signal supply planning sections; a personnel officer; more administrative personnel, radio operators, code clerks, and cipher device repairmen; and more vehicles--for messenger service before electrical means of communication were available, for reconnaissance by the wire officers, and for signal supply men on duty away from headquarters.

70. 45th Div Sig O--Seventh Army, 23 Aug 43, Pt II; Hammond--Tully, quoted in Tully--Moran, 25 Aug 43, par 20; Sig Opm, pp. 129, 131-2, 139.

71. Hammond--Tully, quoted in Tully--Moran, par 20, Sig Opm, pp. 131-2, 139, 143.

72. In the light of experience in North Africa and Sicily, states the Annual Report of the Chief Signal Officer for the Fiscal Year 1944 (p. 119) "these companies were dissolved for reorganization under the cellular W/O B-500."

DECLASSIFIED

137

"Field salvage sections" should be added to the depot company.

Tables of Basic Allowances. The tables were considered satisfactory on the whole but capable of improvement in many ways. The division signal company, it was agreed, needed only one TC-3, but its allotment of EE-8's ought to be increased to 80 and that of W-110 to 200 miles. The RL-17 was "unsatisfactory for field use". The company should have nine SCR-193's, those intended for service with infantry regiments or combat teams to be mounted in jeeps and the remainder in 3/4-ton vehicles. Another frequency meter was necessary; direction-finding equipment, superfluous. 12 1/4-ton trailers were essential for the company; the division signal supply officer needed a jeep and two 2 1/2-ton 6x6 cargo trucks with one-ton trailers.

For corps and army there should be British Multi-airline or equivalent materials for rapid wire construction, more vehicles for message centers, and planes for messengers--six per army and three per corps. Army should be authorized three TC-1's, to be held in the army signal depot until needed, and .104 or larger copper wire--12 gauge B & S.

73. Wire O--Sig O, Seventh Army, 22 Aug 43, pp. 2-3; Asst Wire O--Sig O, Seventh Army, 23 Aug 43; Capt Berry--Sig O, 22 Aug 43; Asst Sig Sply O--Sig O, Seventh Army, 21 Aug 43; Sig Sply Admin O--Sig O, Seventh Army, 21 Aug 43; Lt. Palmer--Sig O, Seventh Army, 21 Aug 43; Lt Dunn--Sig O, Seventh Army, 20 July 43; Rad Plng O--Sig O, Seventh Army, 20 July 43; Lt Blosser--Sig O, Seventh Army, 20 Aug 43; Sic Opn, pp. 129, 131-2, 139.

74. Sic Opn, pp. 165, 189.

75. Sic Opn, pp. 165, 167.

DECLASSIFIED

DECLASSIFIED

138

T/BA in general, it was believed, should provide carrier equipment other than the too complex TC-21 and 22, two wire repeaters rather than the four-wire type (the EE-89 seemed promising but had arrived too late for field testing in Sicily), more long-range field wire, and a standardized test board. A few changes in tools were suggested too. The cable plow and the cable assembly CC-358 ought to be removed from T/BA and kept in depot stock.

Larger power units were required to operate the various tele-
typewriter and code machines and to provide lights at these points and
in the message center. Better photographic equipment was wanted--lenses,
particularly. All units needed CODEX machines; the Division Field Code
and Air-Ground liaison code could be dispensed with. Every construction
team should have one mine detector SCR-625.

76. Sic Opn, pp. 165-67; Wire O--Sig O, Seventh Army, 22 Aug 43, pp. 1-2.

77. Sic Opn, pp. 165-66.

DECLASSIFIED

DECLASSIFIED

INDEX

139

	Page No.
Communications Networks	
Circuits 21 July	73
Landing Operations	54, 57A - 63
7th Army	93
Ship Stations	111
LST 369	68
USS Ancon	3, 60
USS Biscayne	65, 66
USS Monrovia	54, 57A - 59
USS Orizaba	68, 69
Terminals, Land	
Agrigento	73, 74, 80, 82, 95, 96
Algiers	6, 54
Alimena	81
Aragona	76
Bizerte	6, 57, 87, 95
Brolo Amphibious Operation	98
"Cadet"	73
Caltanissetta	73, 78, 81, 82
	84, 91, 96
Campobello	73, 75, 77, 81
Canicatti	73, 81, 82
Cap d' Orlando	94, 95
Carthage	1
Casablanca	6
Castletermini	73
Cefalu	85, 93, 96
Cerami	91, 99, 100
Cesaro	97
Constantine	6
Gila	2, 57A, 58, 59, 61
	62, 69, 70, 71, 73
	74, 77, 79, 81
Immerese	93
Leonforte	93
Licata	1, 2, 57A, 60
	64, 66, 68, 70
	72 - 75, 79, 81, 91
Messina	85, 92
Misilmeri	84, 95
Monreale	95
Naro	73, 81, 82
Nicosia	91, 92

DECLASSIFIED

DECLASSIFIED

Communications Networks,
Terminals, Land - Cont'd.

Oran	6
Orlando	92
Oujda	6
Palermo	71, 73, 75, 77
	80 - 82, 84 - 85
	93 - 97, 99
	73, 81
Palma	85, 91, 93 - 95
Petralia	63
Ponto Olivia	84
Prizzi	72
Ragusa	99 - 100
Randazzo	93, 94, 98
San Agata	85, 92
San Fratello	76, 85, 93 - 95
San Stefano	97
	68, 75
Santa Oliva	1, 2, 57A, 61
Scoglitti	91
Sperlinga	6
Tebessa	85, 93, 96
Termini	95, 96
Trapani	85, 91, 99
Troina	89, 94
Tusa	81
Vallélunga Pratomeno	7
Valletta	81
Villafrati	75
Villa Rosa	64, 70, 74, 79
Vittoria	125
Communications, Visual	123
Construction Policy	
Equipment	
Cable Plow Assembly CC-358	138
Cipher Devices	127, 138
Code X	127, 138
M-134C	60, 72, 83, 102
M-134-6	95
M-209	60, 102, 127
SIGABA	127
SIGMIS	127
Strip Systems	127
Maintenance of	96, 120
Mine Detector	138
Navy Set TCS-5	66
Power Unit PE 75	116, 132
PE 92	132
PE 95	116, 132

DECLASSIFIED

3

141

DECLASSIFIED

Equipment - Cont'd.

Radio Sets

SCR-188

SCR-193

SCR-284

SCR-299

SCR-509

SCR-511

SCR-536

SCR-608

SCR-609

SCR-610

Reel Unit

RL-17

RL-26

RL-31

Switchboard

BD-71

BD-72

Telegraph Set, TG-5

Telephone

EE-8

EE-8-A

EE-89

Telephone Central Office

TC-1

TC-2

TC-3

TC-4

TC-21

TC-22

Wire

Rapid Pole Line

Spiral-4 Cable

W-110

W-110-B

W-130

W-143

Wire Drum DR-4

Field Order No. 1

Frequencies

65, 66
57, 59, 61, 62
64, 65, 67, 69
75, 94, 98, 103
115 - 117, 137
62, 63, 89, 90
103, 116
6, 54, 57, 59
60, 61, 71, 72
75, 94, 98, 103
114, 116, 117, 132
68, 69
67, 117
67, 116, 117
57, 65, 116
90, 116
65, 116
137
63
62, 119
119
62, 69, 73, 119
119
62, 137
119
138
96, 123, 137
86, 88, 96
119, 137
60, 80, 86, 88
94
138
138
55
55, 74, 80, 81
83, 94, 124
62, 63, 123, 124, 137
55, 67, 74, 83, 89
89
119, 124
62, 89
8 - 53
59

DECLASSIFIED

4

DECLASSIFIED

142

Intelligence and Intercept	4, 65, 126
Invasion, Preparatory Phase	
Plans	1 - 3
Communication	6 - 7
Headquarters Ships	3
Signal Supply	5 - 6
Traffic	6
Landing Operations	56 - 57A
Beachhead Established	57A
CENT Units	64
DIME Units	61
JOSS Units	64
KOOL Units	68, 70
Plans and Obstacles	108, 109
Message Centers	
Aboard Ship	111
USS Biscayne	66
USS Monrovia	54
D-Day	59
KOOL Sub - Task Force	68, 69
Palermo Drive	83
Palermo - Messina Area	87
Status 14 July	72
Message Regulations, Violation of	110, 111, 113
Messenger Service	61, 87, 113, 114
Monitoring Service	58, 59
Operating Forces	
CENT	5
DIME	5
HUSKY	4
JOSS	5
KOOL	5, 68
Organization	
Operational	109
Relations between Staff Elements	110
Tables of	134
Organizations, Tactical	
I Armored Corps, Reinforced	2, 6
Field Order No. 1	8 - 53
Intercept Service	4
1st Armored Signal Battalion	85, 87, 93 - 95
Army-Navy Operations	57A, 58
Communications Networks	71
Company A	82
B	73
C	72, 73, 80, 81, 83
D	72, 73, 80, 81
KOOL Communications	68
Personnel	54

DECLASSIFIED

5

DECLASSIFIED

143

Organizations, Tactical - Cont'd.

1st Division	2, 71, 80, 85, 91, 99
Command Post	74, 85
KOOL Communications	69
Palermo Drive	83
1st Engineer Special Brigade	98
1st Mobile Radio Broadcasting Company	97
1st Ranger Battalion	56
1st Signal Company	4
Assault Plans	56
Equipment	57
Landing Operations	62, 108
Personnel	57
Radio Operations	103
2nd Armored Division	2, 71, 75, 84
Administrative Radio Net	77
Palermo	80, 84
Signal Supply	77
2nd Broadcast Station Operating Detachment	97
II Corps	2, 60, 71
Signal Supply	78
3rd Division	2, 71, 75, 77
Message Center	113
Palermo	80, 84
Provisional Pack Train	88
3rd Signal Company	4
Landing Operations	64, 67, 98
Radio Operations	102 - 103
4th Ranger Battalion	56
7th Army	1
Headquarters	92, 95, 96
Signal Supply	78
9th Division	2, 4, 85, 99
9th Signal Company	99
15th Army Group Headquarters	1
16th Regimental Combat Team	74
18th Regimental Combat Team	2, 56, 69
26th Regimental Combat Team	74
36th Engineer Regiment	64, 79
39th Engineer Regiment	56
40th Engineer Regiment	98
45th Division	2, 71, 80, 85
Landing Operations	57A
Palermo Drive	83
Wire Circuits	89
45th Signal Company	64, 75
51st Signal Battalion	6, 74
Assault Force	56
Company A	56, 84, 95
Counter - Battery Net	60

DECLASSIFIED

DECLASSIFIED

Organizations, Tactical

51st Signal Battalion - Cont'd.	
Embarkation for Sicily	87
Landing Operations	67
Palermo Installations	93
Personnel	95
Seventh Army Headquarters	96, 97
Wire Teams	76
52nd Wireless Intelligence Section	57
53rd Signal Battalion	4, 85, 93
Assault Detachments	55
Company A	88
Company C	88
D-Day Operations	61, 62
Wire Installations	74, 100 - 102
71st Signal Company	4
Beach Communication System	64
Fifth Army Headquarters	98
Supply Operations	79
Wire Communication	82
72nd Signal Company	4
74th Signal Company (Special)	64, 98
82nd Airborne Division	2, 71, 75
82nd Airborne Signal Company	103
128th Signal Radio Intelligence Company	4, 57, 66
KOOL Landing Operation	70, 97
142nd Armored Signal Company	68
Landing Operations	69
Licato - Palermo Drive	77, 95
177th Signal Repair Company	79
206th Signal Depot Company	70, 79, 92
229th Signal Operations Company	73, 82, 87, 98
286th Signal Company (Composite)	4
Landing Operation	61
KOOL Sub Task Force	68, 74
Wire Communication	82, 98
505th Paratroop Combat Team	2
540th Engineer Shore Regiment	69
814th Signal Port Service Company	88, 91
	92, 97
Signal Supply	104
849th Signal Intelligence Service	57, 97
Personnel	3
1st Armored Signal Battalion	94, 95
1st Signal Company	56
KOOL Force	70
Message Center	54
Situation, General	128
Photography	125A
Pigeons	125

DECLASSIFIED

7

145

DECLASSIFIED

Plans	
Assault	56, 57
CENT	64
DIME	61
JOSS	64
KOOL	68
Obstacles Encountered	105, 108
Sicilian Campaign	1 - 7
Signal Communication	8 - 53
Problems and Lessons	105 - 138
Procedure, Radio and Wire	118
Radio Operations	
1st Signal Company	103
3rd Signal Company	102 - 103
Interference	90
Licato - Palermo Drive	25
Palermo - Messina Axis Area	86
Problems Encountered	114 - 118
Relay Stations	87, 90
Regulations, Violation of Message	110, 111
Security	126
Sicilian Facilities	123
Signal Supply	70, 131
Assault Phase	78
Depot at Palermo	91
Items Required	103
JOSS Unit	67
Landing Operations	108, 109
Licato - Palermo Drive	77
Operational Organization	109
Plans, General	5
Policy	132
Spare Parts	132
Tables of Basic Allowances	137
Traffic, Message	59, 72
1st Armored Signal Battalion	94 - 95
3rd Division	68
3rd Signal Company	102
53rd Signal Battalion	102
Amphibious Phase	68
Code Groups	72, 95
Invasion Preparation	6
Palermo Drive	83
Palermo - Messina Area	87
Violation of Regulations	95, 110, 111, 113

DECLASSIFIED

RESTRICTED

146

DECLASSIFIED

Training
Wire Communication
Circuits
Landing Operations KOOL
Licato to Palermo
Palermo Drive
Palermo - Messina
Status 13 July

4, 5, 129
100 - 102
63
69
76
77 - 84
85 - 90
72

DECLASSIFIED

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